

GRADE 4

TEACHER BACKGROUND INFORMATION

NUTRITION

FOOD

Food is life. People, animals and plants need food to grow and remain healthy. The substances in food that help people grow and stay healthy are called nutrients.

NUTRIENTS

We need over 50 nutrients for good health. These nutrients have their own jobs to do, but often depend on each other. Because foods are different they give us different nutrients. No one food can provide all the nutrients we need. This means we must eat a variety of foods every day.

From food we also get energy to carry out daily activities. The energy comes from fats, carbohydrates and protein. If food gives more energy than needed, the extra energy is stored as fat.

If not enough energy comes from food, then the body loses weight. So, food energy must be balanced with activity to control body weight.

Although there are more than 50 nutrients essential for health and growth, there are only six major groups of nutrients:

Nutrient:	Function:
1. Protein	builds and repairs body tissue, e.g., muscles, skin
2. Fat	insulates and protects supplies energy
3. Carbohydrates	carries vitamins A, D, E and K important source of energy

4. Vitamins	Vitamin A: good night vision, healthy skin Vitamin C: healthy gums, teeth & blood vessels fights infection B vitamins: help the body use energy (Riboflavin) (Thiamin) (Niacin)
5-. Minerals	Calcium: strong bones & teeth Iron: good blood
6. Water	regulates body functions

What Foods Do We Eat To Get All These Nutrients?

Traditionally, people in the North ate a healthy diet. The hunting and fishing lifestyle was active and healthy. There were times of little food, but generally people were able to feed themselves well. People wasted very little of their food sources. For example, they would eat all of an animal they killed; the eyes, brains, lips, stomach contents, etc. That way they were able to get all the nutrients they needed. Today, lifestyle and food sources in the North have changed. Both store and country foods are needed for good health and nutrition. The stores have many nutritious foods, but also some that aren't so nutritious. People need to choose foods carefully for best nutrition and value for their money.

Here's a list of foods, from the country and the store, that will give people the nutrients that they need everyday.

Nutrient	Country Food Source	Store Food Source
Protein	Wild game (all parts of the animal), wild birds, wild bird eggs, animal blood, fish, fish eggs, organ meats (liver, kidney, heart)	Beef, pork, chicken, turkey, organ meats, fish, dried beans and peas, cheese, eggs, nuts/seeds, peanut butter
Carbohydrate	Bannock, wild berries and greens, seaweed, animal stomach contents	Bread, whole grain cereals, enriched pasta (macaroni noodles, etc.), rice, dried beans and peas, macaroni dinner, crackers, pilot biscuits
Fat	Wild birds, wild game fat, muktuk, animal intestines	Beef, pork, luncheon meats, bologna, sausages, bacon, nuts/seeds, wieners, lard, butter, margarine
Calcium	Animal stomach contents, fish heads and bones, seaweed/kelp, wild dark green vegetables, bones, wild milk	Milk, cheese, yogurt, sunflower seeds, broccoli, dried beans/peas, canned fish with bones ((salmon, sardines)
Iron	Game, wild birds, organ meats, seaweed, animal blood, wild greens	Organ meats, red meats, pumpkin seeds, green leafy vegetables, enriched cereal products, enriched pasta (macaroni, noodles, etc.)
Vitamin C	Wild greens, wild berries, seaweed	Potatoes, cabbage, broccoli, turnip, canned tomatoes, alfalfa and bean sprouts, oranges, orange and grapefruit juice, vitaminized apple juice
Vitamin A	Seal, wild birds, muktuk, animal stomach contents, seaweed, animal and fish liver, wild greens and berries	Broccoli, spinach, milk, butter, liver, carrots, squash
Vitamin D	Fish liver oils	Vitamin D fortified milk
Thiamin	Seal, wild birds, organ meats, muktuk, seaweed, bannock, wild greens	Dried beans/peas, pork, organ meats, nuts/seeds, enriched bread/cereals, enriched pasta (macaroni, noodles, etc.)
Riboflavin	Game, wild birds, stomach contents, organ meats, wild bird, eggs, seaweed, bannock	Milk products, organ meats, enriched breads, cereals, enriched pasta (macaroni, noodles, etc.)

Nutrient	Country Food Source	Store Food Source
Niacin	Animal stomach contents, seaweed, bannock, organ meats, wild game, wild birds	Organ meats, enriched breads and cereals, enriched breads and cereals, enriched pasta (macaroni, noodles, etc.)

As shown in the above list, some foods provide more than one nutrient. Example: Wild game provides protein, fat, iron, vitamin A, thiamin and riboflavin. Also, some foods are the main source of more than one nutrient. Example: fortified milk is a main source of calcium, and it is also a main source of Vitamin D.

The Food Guide (Canada's Food Guide or the N.W.T. Food Guide), puts food together into four food groups, based on the leader nutrients they provide. By selecting foods from EACH group daily we can be sure of getting all the nutrients we need.

Here's a summary of what each group provides us with:

Milk and milk substitutes group (includes soft bones)	Calcium, riboflavin, vitamins A and D, protein, fat, carbohydrate
Meat, fish, birds and eggs Group	Protein, iron, fat, vitamin A, thiamin, riboflavin, niacin
Bannock, bread and cereal group	Carbohydrate, thiamin, riboflavin, niacin, iron, fibre, protein
Fruit and vegetables group (includes intestines and stomach contents)	Vitamins A and C, carbohydrate, fibre, iron.

The food groups are colour coded to help people plan a healthy diet

- Blue Milk and milk substitutes
- Red Meat, fish, bird, eggs and all edible parts
- Green Fruit and vegetables
- Orange Bannock, bread and cereal

This allows people to quickly identify a food with its food group, e.g., "Milk belongs to the blue group."

THE FOUR FOOD GROUPS

The following foods belong to the four food groups of the N.W.T. Food Guide. Each food belongs to a particular food group because it is a good source of the group's leader nutrient(s). Foods marked with an asterisk are illustrated in the Guide.

Milk and Milk Substitutes

almonds (3/a cup)
 breast milk
 broccoli
 (2 med. stalks)
 canned fish with
 bones (salmon)
 cheese *
 natural *
 processed *
 cottage cheese
 cream soup
 custard
 fish bones
 & head *
 ice cream
 milk *
 evaporated *
 homogenized
 powdered *
 2% UHT *
 milk pudding
 sardines
 seaweed *
 soft animal
 bones *
 yogurt *

Meat, Fish, Bird, Eggs and all edible parts

baked beans *
 bear
 beef
 canned fish
 caribou *
 chicken *
 dried beans
 & peas
 dried meat/fish *
 duck *
 fish
 fish eggs
 hamburger
 heart
 kidney
 liver
 moose
 muskox
 muskrat *
 nuts
 peanut butter
 porcupine
 pork/ham
 ptarmigan
 rabbit *
 seal *
 tongue
 turkey
 walrus
 whale

Fruit and Vegetables

animal fat *
 animal stomach
 & intestine
 contents
 bananas *
 berries *
 broccoli
 brussel sprouts
 cabbage
 carrots *
 cauliflower
 cherries
 dandelion greens
 dried fruit
 fiddlehead greens
 fireweed
 oranges *
 peaches
 pears
 plums
 potatoes *
 tomatoes
 turnip
 unsweetened fruit
 juice *
 vegetables
 canned *
 frozen *
 wild greens *
 wild rhubarb
 willow buds

Bannock, Bread and Cereal

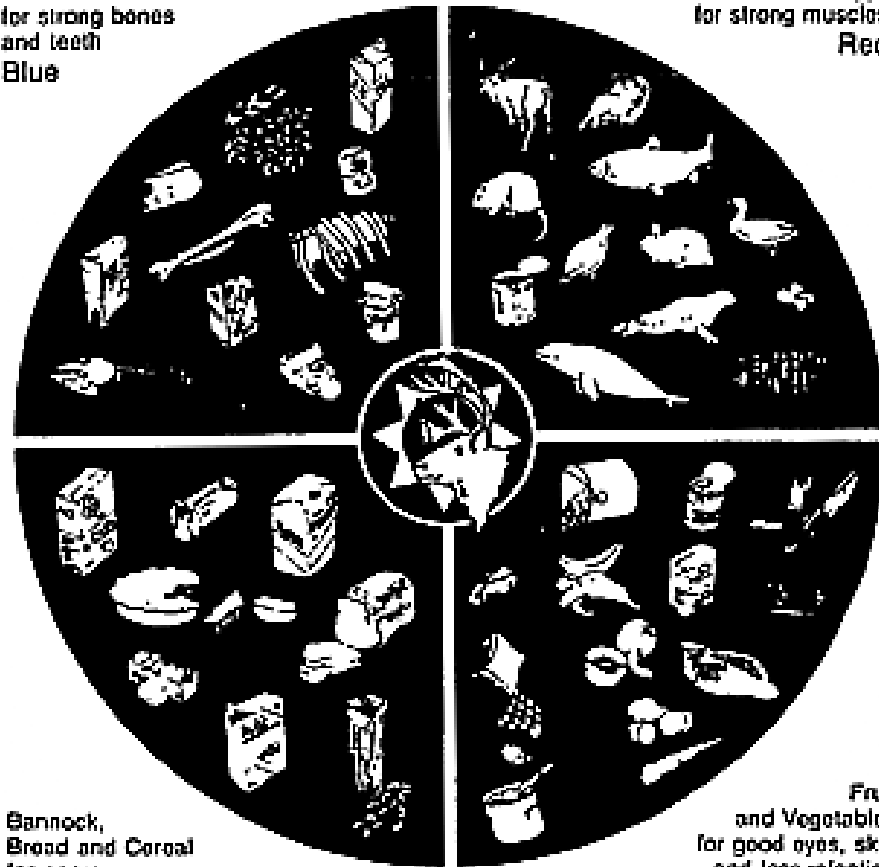
animal brains
 bannock*
 bone marrow
 bread *
 flour *
 liver
 macaroni *
 muffins
 muktuk
 oatmeal *
 pancakes
 pilot biscuits *
 rice *
 soda crackers *
 spaghetti *
 whole wheat
 wild rice

N.W.T. FOOD GUIDE

Eat foods from each group every day for health.

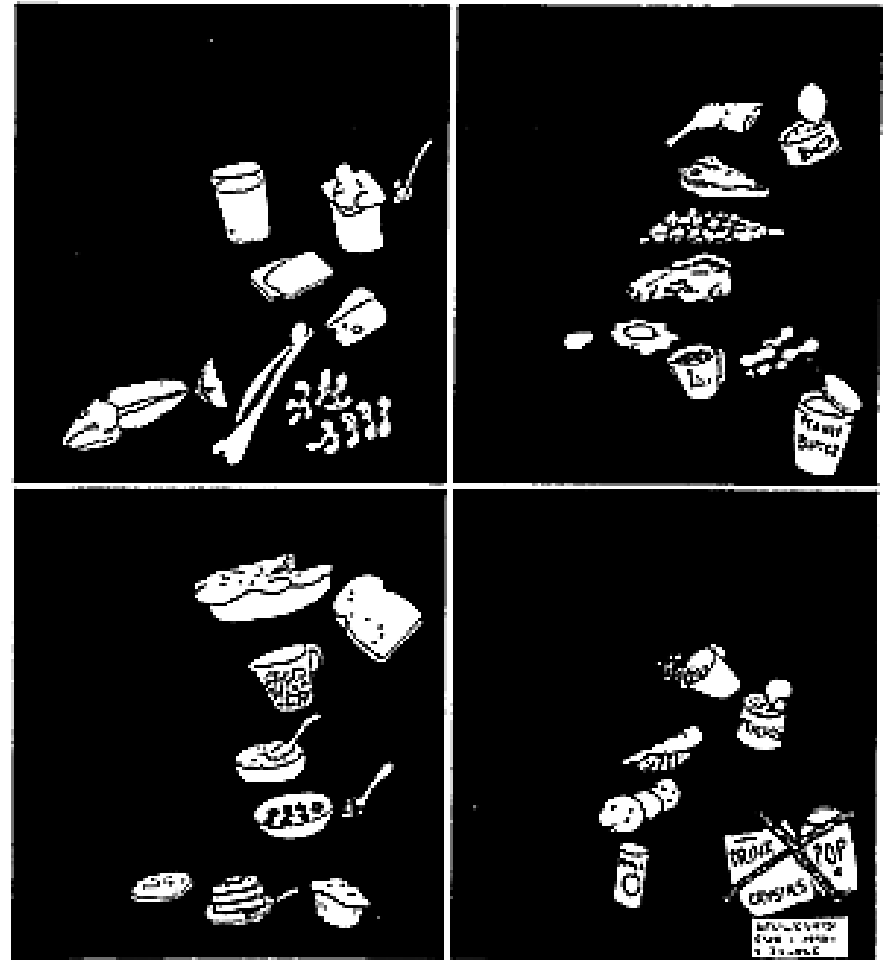
Milk and milk substitutes
for strong bones
and teeth
Blue

Meat, Fish, Birds and Eggs
for strong muscles
Red



Bannock,
Bread and Cereal
for energy
Orange

Fruit
and Vegetables
for good eyes, skin
and less infection
Green



SERVING SIZE:

Specific serving sizes are applied to foods within each food group to ensure a certain amount of nutrient is provided by each serving, for example:

Milk and Milk Substitutes:

Each of the following serving examples yields approximately 300mg of calcium:

- 250 ml (1 cup) of milk
- 175 ml (3/4 cup) of yogurt

- 45 gm (1 1/2 oz.) of cheese
- 200 ml of almonds
- 2 medium stalks of broccoli

Meat, Fish, Bird, Egg and All Edible Parts:

Each of the following serving examples yields approximately 12 to 22 gm of protein:

- 60 to 90 gm (2 - 3 oz.) cooked meat, fish, poultry
- 60 ml (4 tablespoons) peanut butter
- 250 ml (1 cup) cooked dried peas, beans or lentils
- 125 ml (1/2 cup) nuts or seeds
- 60 gm (2 oz.) cheddar cheese
- 125 ml (1/2 cup) cottage cheese
- 2 eggs

Fruits and Vegetables:

Each of the following serving examples yields approximately 200 to 400 RE of vitamin A or 20 to 40 mg of vitamin C:

- 125 ml (1/2 cup) vegetables, berries or fruits (fresh, frozen, or canned)
- 125 ml (1/2 cup) juice (fresh, frozen or canned)

Bannock, Bread and Cereals:

Each of the following serving examples yields approximately 15 gm of carbohydrates:

- 1 slice of bread
- 1 piece of bannock
- 125 ml (1/2 cup) cooked cereal
- 175 ml (3/4 cup) ready to eat cereal
- 1 roll or muffin
- 125 to 175 ml (1/2 - 3/4 cup) cooked rice, macaroni, spaghetti or noodles
- 1/2 hamburger bun

Note: Preschooler and child serving sizes are smaller.

NUMBER OF SERVINGS:

Nutrient requirements are influenced particularly by age, sex, growth rate and activity. For this reason the number of recommended servings varies, e.g.:

Milk and Milk Substitutes: children: two - three servings adolescent: three - four servings adult: two servings pregnant or lactating woman: three - four servings To ensure the development of strong bones and teeth a growing child requires two - three servings of milk a day, whereas an adult requires two servings for body maintenance.

Meat, Fish, Bird, Eggs and All Edible Parts:
all ages: two servings

Fruit and Vegetables:
all ages: four - five servings

Bannock, Bread and Cereal:
three - five servings or more, depending on levels of physical activity

It is not necessary to have all servings of a food at any one time. It is the day's total intake from each food group that is important. A child may prefer to have two servings of milk in four half cup portions throughout the day.

The N.W.T. Food Guide recommends types and amounts of foods to eat to be healthy. Eating the recommended number and size of servings from each food group ensures a balanced diet. The range in the number of servings represents the change in nutrient requirements that occurs throughout the lifecycle. The recommended serving size for each food within a group may vary as each item contains different amounts of leader nutrients.

PRINCIPLES OF HEALTHY EATING

In addition to indicating what to eat, the N.W.T. Food Guide promotes three principles for healthy eating: variety, balance and limit.

Variety: A variety of foods ensures that all nutrients will be obtained. Variety also makes meals more appealing and stimulates eating. No one food or food group provides all the necessary nutrients needed for health. To obtain all the required nutrients, the N.W.T. Food Guide recommends eating a variety of foods from each food group. Variety can be achieved by selecting different foods within each food group at meal and snack times.

Balance: Many of today's illnesses stem from an imbalance between how much we eat and how much we exercise. To maintain a healthy weight, we should eat a diet containing a moderate amount of energy, and exercise regularly. Energy is used daily for body maintenance, repair, growth and physical activity. The amount of energy needed varies with age, sex, level of physical activity and body size. An active person needs more food energy than someone who sits most of the day. If you eat more than the body needs, you could gain weight. Obesity is a major problem in the N.W.T. and is associated with health problems such as diabetes and heart disease.

Limit: Not all food contributes to the maintenance of our health. Foods that contain a lot of sugar, salt and fat should be eaten only occasionally. Foods which are high in energy are those which are high in sugar and fat content. Alcohol is also very high in calories.

Low energy foods are usually more nutritious, contain fewer calories and provide many of the important nutrients our bodies need for daily functioning. High energy foods contain large amounts of sugar, and/or fat and usually salt, with few of the required nutrients our bodies need. It is important to choose foods wisely - choose nutritious low energy foods.

MAKE ENERGY-WISE CHOICES

Food Group	Nutritious - Low Energy Foods	High Energy Foods
Milk and milk products (Blue Group)	Skim milk, 2% milk, plain yogurt, lowfat cheese, cottage cheese.	Whole milk, ice cream, flavoured yogurt, cream, cheese.
Meat, fish, birds and eggs (Red Group)	Caribou, moose, chicken, fish, eggs, dried beans and peas, lean meats, organ meats.	Canned luncheon meats, sausages, bologna, peanut butter, nuts, wieners.
Fruits and vegetables (Green Group)	Unsweetened fruit juice, fresh berries, fruits, vegetables, plain frozen fruits . and vegetables, fruits canned in "own juice".	Fruits canned in "heavy syrup", frozen vegetables in sauces, dried fruit, sweetened fruit juice.
Bannock, bread and cereal (Orange Group)	Bannock, whole grain muffins, bread, (unsweetened) cereals, pilot biscuit, plain popcorn.	Sweetened cereals, cake, doughnuts, cookies, pastries.
Foods that do not belong to a food group.	Water, clear soups.	Soft drinks, chips, chocolate bars, candies, sugar, butter or margarine, cream, cream cheese, sour cream, buttered popcorn.

MEAL NAMES AND TIMES

Canada's Food Guide does not state a specific number of meals a day. For good nutrition and vigour, food intake should be spread throughout the day. "Three meals a day" is perfectly acceptable, but there is no scientific reason to make it a rigid rule. The number and timing of meals and snacks depends on personal preference - meal frequency is a lifestyle decision.

Students may eat at different times depending on the circumstances within the home.

In homes where one or more adults work (in the wage economy), and where there are school age children it is likely that students will eat at:

- morning meal - or breakfast
- noon meal - or lunch
- evening meal - or supper/dinner
- snacks

(The terms morning meal, noon meal and evening meal are English translations of the corresponding terms in Inuinaktun, and are similar in other native languages.)

However some students may eat at other times. In some homes, food is always available and people eat continuously throughout the day, without having main meals. Not everyone eats main meals before school, at noon hour and after school/work.

What is important is that people follow the N.W.T. Food Guide, in terms of recommended numbers of daily servings and sizes of these servings. If people snack continuously, it is important that these snacks be nutritious, and include varied food items from each food group. It is also important that students start the day with nutritious food. This gives them the energy they need for work and play and aids their concentration.

WHY IT IS IMPORTANT TO START THE DAY WITH NUTRITIOUS FOOD

Many reasons are often given for skipping a morning meal. However, this is the most important food of the day. It ensures quick energy to start the day and lasting energy to carry out morning activities.

It can be any combination of foods, either solid or liquid, that supplies the nutrients needed by our bodies.

People who do not start the day with nutritious food usually fall victim to hunger pangs around coffee break time and opt for nutritionally-poor snacks such as doughnuts. They may soon get into the habit of eating high-calorie snacks, a practice which can lead to being overweight. Children who do not start the day with nutritious food have poor listening skills and are unable to concentrate on their work for long periods of time.

Nutritionally adequate food has the staying power to prevent hunger until the next meal, thus discouraging midmorning snacks and lunchtime extras. A nutritious morning meal consists of food from at least three of the four food groups.

Ref.: Nutrition Communications, Kellogg Salada Canada Inc.

NON-NUTRITIOUS FOODS

Not all available foods can be classified into the four food groups. Such foods contain too few nutrients and/or too much sugar, salt and fat which can contribute to poor health. Other than providing energy (calories or joules), these foods have very few nutrients to help our bodies grow and be healthy.

The following two types of food do not belong in any group of the N.W.T. Food Guide:

1. Foods with very few nutrients, e.g., ordinary and diet soft drinks and gum, which are usually fabricated, i.e., they do not come directly from nature and often contain unnecessary additives; these foods do little to build a strong body.

2. Foods such as potato chips, processed meats and chocolate bars which suffer nutritionally because processing removes many useful nutrients and leaves only those nutrients, e.g., sugar, fat and salt, which can be unhealthy when consumed in excess; they do little to build or maintain a strong body, and often contribute to tooth decay, obesity or high blood pressure.

The following foods in particular are often considered healthy when in fact they contain large amounts of sugar, fat or salt. They do not belong to any food group:

- whipping cream, cereal cream and sour cream, although they are dairy products, they do not belong to the Milk Group because they contain very little calcium or protein and are high in fat; - non-dairy beverage whiteners, e.g., Coffeemate, even though they look like milk in coffee and tea, do not belong to the Milk Group because they contain no milk, but mostly sugar and oils; - canned meats, e.g., Kwik, Spam, bologna, side bacon and wieners do not belong to the Meat Group because they contain very little protein and Iron and are high in salt and fat; - fruit drinks, fruit pop, Fruit Roll-ups, fruit jam, jelly and Jello do not belong to the Fruits and Vegetables Group because they are all high in sugar and contain very few vitamins; - doughnuts, sweet buns, cookies and cakes have all the nutrients of the flour or cereal used in their baking, however they also contain extra fat and sugar. Sweetened cereals are sometimes enriched, and therefore contain nutrients, however they have a high sugar content. ,

These foods are sometimes referred to as "extras". The

N.W.T. School Health Program has avoided use of this term and instead labelled them as foods which do not belong to any food group.

SNACKS

In the **N.W.T. School Health Program** "snacks" refer to foods eaten between main meals. They may be either nutritious (belonging to one of the four food groups) or non-nutritious (not belonging to a food group), depending on the food eaten. Snacking habits vary greatly among families and cultures. In some families food may be more or less continuously available for eating between meals. In others, eating between meals may be discouraged. The teacher should be sensitive to this and try to determine what snacking habits his/her students have.

It is important, however, that all snacks are nutritious and are included as part of the recommended daily servings.

IMPACT OF SNACKING ON NUTRITIOUS MEALS

Nutritious meals are defined as those where there is at least one serving from each of the four food groups. The exception is breakfast which requires servings from only three food groups.

This concept of nutritious meals is based on the practice of very little snacking. If, in fact, students snack a lot (on nutritious foods) then they would not eat servings from each food group at each meal. Students should look at their daily food intake to determine if they are eating nutritiously.

Recommended daily servings are:

Milk and milk substitutes - 4 servings

Meat, fish, birds and eggs - 2 servings

Bannock, bread and cereal - 3 - 5 servings

Fruit and vegetables - 4 - 5 servings

Again, it is important to emphasize the need for nutritious food to start the day.

SNACK GUIDE

Food Group	Eat Anytime!	Eat Only With Meals and Brush Teeth Afterwards	Don't Snack on Regularly	Avoid These Snacks!
Milk and milk substitutes (Blue Group)	Plain milk, plain yogurt, cheese, soft ends of bones, soft fish bones	Milk puddings, ice cream, milkshakes, sweetened yogurt, strawberry milk, chocolate milk		
Meat, fish, birds and eggs (Red Group)	Country meats, store meats, dried meat, fish, wild birds, fish eggs, nuts and seeds, hardcooked eggs, peanut butter			
Fruits and vegetables (Green Group)	Raw berries, fruits, vegetables, salads, vegetable soup, seaweed, unsweetened fruit and vegetable juice, animal stomach contents	Raisins, dried fruit, sweetened fruit, sweetened fruit juice, unsweetened fruit leather		
Bannock, bread and cereal (Orange Group)	Bannock, enriched and whole grain breads and muffins, crackers, unsweetened cereals, plain popcorn	Granola bars, home-made; low sugar, granola, whole grain cookies		Presweetened cereal
Other foods (foods in more than one group and foods not in the Food Guide)	Pizza, clear soups, sandwiches (meat, cheese, eggs or peanut butter) hamburgers		Pretzels, buttered/ salted popcorn, potato chips, cheesies, sugar-free soft drinks, sugar-free gum	Regular soft drinks (pop), honey, jam, jellies, chocolate bars, cookies, candies, regular gum, breath mints, popsicles, sweet buns, doughnuts. "Drink" crystals (Tang), fruit roll-ups

A VARIETY OF HEALTHY SNACK FOODS

FRUITS AND VEGETABLES

Unsweetened fruit or vegetable juice (the word "juice" must be on the label); raw fruit and vegetable pieces; canned fruits that are unsweetened or packed in their own juices; fruit juice popsicles; wild berries; wild vegetables.



MILK AND MILK PRODUCTS

Homo milk, evaporated, UHT; 2% of skim milk, or reconstituted skim milk powder or a combination; low fat cheese; cheese or cottage cheese; plain yogurt; plain yogurt with fresh fruit or juice added; soft ends of bones to chew on.



BREAD AND CEREALS

Bannock; crackers, pilot biscuits, etc.; unsweetened dried cereals; cooked cereals; whole wheat bread or toast; enriched white bread or toast; fruit or whole grain muffins or loaf; homemade cookies - oatmeal, peanut butter.



MEAT AND ALTERNATIVES

Wild game - raw, fresh, frozen, cooked or smoked; fish -canned, fried, frozen or smoked; hard cooked egg; peanut butter; nuts and seeds - sunflower and pumpkin; cheese; meat - sliced, cold, cooked, canned, dried, smoked.



COMBINATION SNACKS

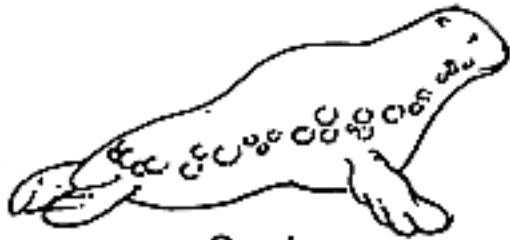
Bannock with peanut butter, cheese, berries, raisins, etc.; celery sticks with peanut butter or cheese; mini pizza (English muffin or roll with tomato or spaghetti sauce and cheese); peanut butter on toast or bread; cheese on toast or bread; cheese and crackers; cheese and fruit; raw fruits or vegetables with a yogurt dip; cereal with milk and fruit.



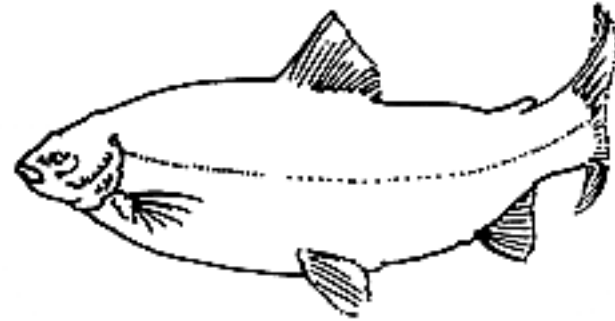
Snacks can be served with unsweetened fruit juice or milk as a beverage. To quench thirst, water is the best!

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

Leader Nutrients: Protein, Iron



Seal



Fish



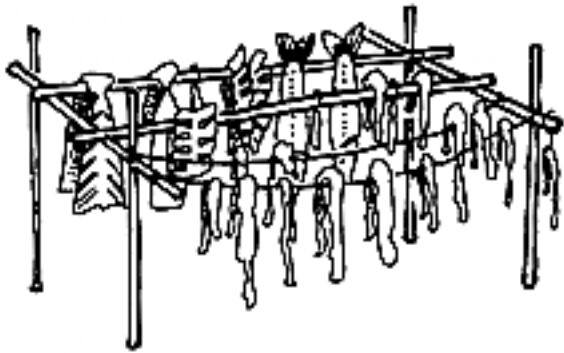
Rabbit



Whale

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

Leader Nutrients: Protein, Iron



Dried Meat and Fish



Caribou



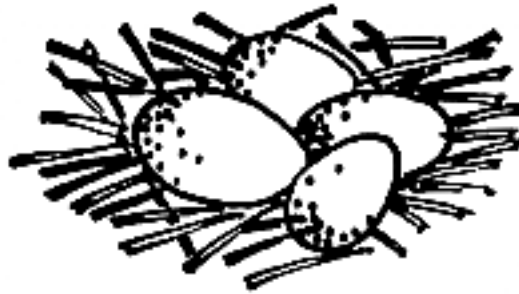
Muskrat

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

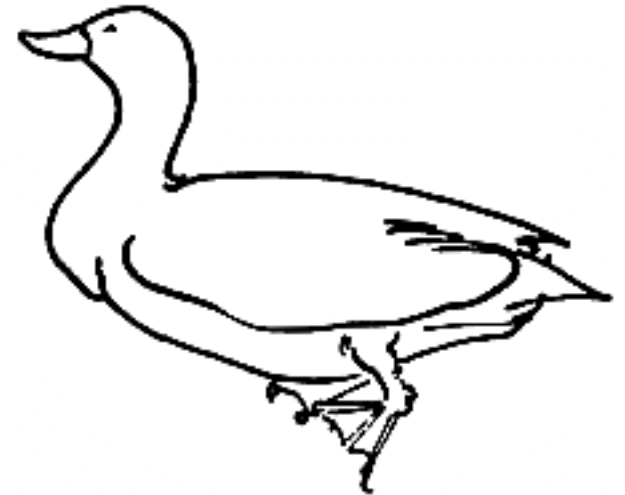
Leader Nutrients: Protein, Iron



Ptarmigan



Eggs



Duck

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



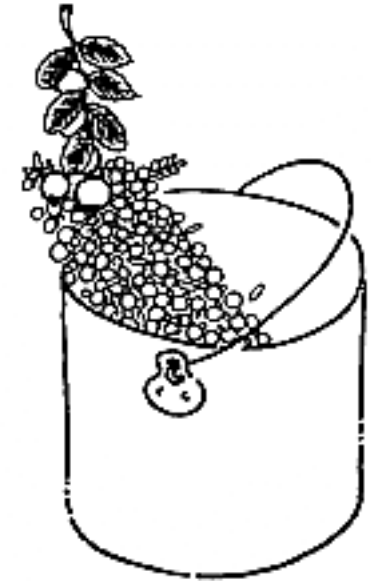
Seaweed



Clover



Dock



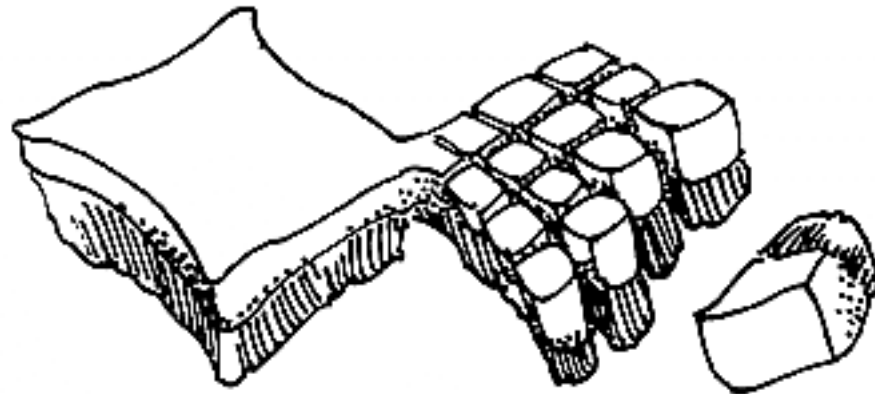
Berries

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



Seal Fat

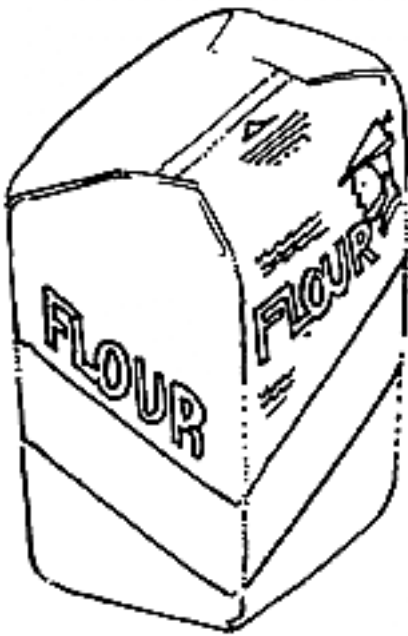


Muktuk

Even though these foods come from animals they are part of the Fruit and Vegetables Group because of their high vitamin content.

COUNTRY FOODS FROM THE BANNOCK, BREAD AND CEREAL GROUP

Leader Nutrient: Carbohydrates for Energy



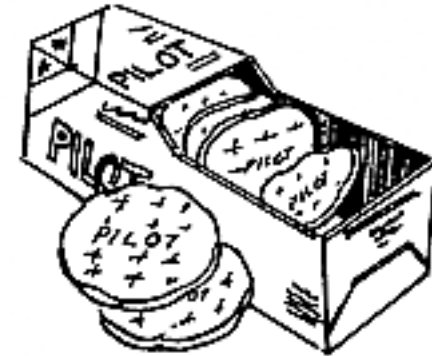
Flour



Oats



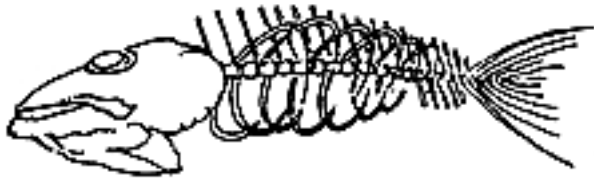
Bannock



Pilot Biscuits

COUNTRY FOODS FROM THE MILK AND MILK SUBSTITUTES GROUP

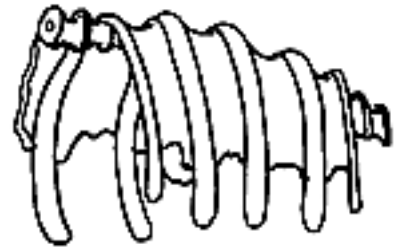
Leader Nutrient: Calcium



Fish Head and Bones



Leg Bone



Rib Bones

Even though these foods may seem like meat sources, they are part of the Milk and Milk Substitute Group because of their high calcium content.

TIPS ON NUTRITIOUS PURCHASES IN ISOLATED COMMUNITIES

How to remain healthy without fresh foods.

FRUIT AND VEGETABLES

1. Frozen, canned or dried fruits and vegetables are good sources of vitamin A and C.
2. The following vegetables are rich in vitamin A and C: carrots, broccoli, brussel sprouts, cauliflower, cabbage, potatoes, tomatoes, tomato juice, spinach, sweet potatoes, green peppers, strawberries, apricots, apple and orange juices.
3. Cost. Most canned vegetables and fruits cost the same price per serving as frozen ones. Food price comparisons should always be done per serving i.e., approximately 100 gm or 1/2 cup (125 ml). It is worthwhile to calculate, compare and save.
4. Frozen vegetables. Most frozen vegetables are very rich in vitamin C, e.g., a serving (1/2 cup) of frozen broccoli, cauliflower, brussel sprouts, or green pepper contains more vitamin C than an orange.
5. Frozen french fries. Frozen have the highest vitamin C content of all the frozen, canned or dried potato products. To avoid too many calories, french fries should be baked instead of deep fried; any additions such as gravy should be avoided.
6. Frozen vegetables are economical. Frozen vegetables are often more economical than fresh because there are no inedible parts or food lost during preparation.
7. Plain frozen vegetables are economical. Frozen vegetables with sauce or other additions are usually twice as expensive as plain, frozen vegetables.
8. Carrots. The prices and nutrition per serving of frozen carrots are comparable with canned carrots.
9. Unsweetened frozen strawberries and frozen fruit juices are the most nutritious buy and the most economical choice of all frozen fruits and fruit juices.
10. Canned and dried fruits are good sources of vitamin A. The best choices are apricots, peaches, tangerines, prunes and raisins.

11. Dried fruits can be eaten as such, or for variety, they can be rehydrated in water or fruit juices; e.g., prunes rehydrated in apple juice are excellent.

12. Wild berries usually abound in northern communities. Three rosehip berries have more vitamin C than one orange. Fresh, dried or frozen berries have a higher vitamin C content than berries in jam or jellies and are better for you.

13. Fresh produce. When fresh produce is available in isolated communities you get the most nutrition out of your food dollar by selecting cabbage, carrots, turnips, potatoes, tomatoes, oranges and bananas; e.g., have a coleslaw salad made with shredded cabbage and carrots; it is an excellent source of vitamin A and vitamin C.

14. Garden produce. Many vegetables can be successfully grown north of the 60th parallel either outdoors in greenhouses or in hydroponic gardens.

15. Decorate food with sprouts. Fresh sprouts can be an interesting alternative to canned or frozen vegetables. Growing sprouts is year-round, instant gardening with minimum equipment, space and effort.

MILK AND MILK SUBSTITUTES

16. Fresh milk and milk products are often rare in isolated communities but powdered and evaporated milk and processed cheese are usually available.

17. Milk and milk products are important food sources of calcium, protein and vitamins (riboflavin, vitamin A, vitamin 812 and vitamin D).

18. Add powdered milk to cooking. One simple and inexpensive way to increase the protein and calcium content of food is to use powdered milk in baked goods, meat loaves, casseroles, macaroni and cooked cereals. A 1/4 cup of dry powder is equivalent to one cup of milk.

19. Evaporated milk makes delicious chowder, home made yogurt, milk desserts (pudding), etc.

20. Reconstituted powdered milk. Powdered milk is acceptable to many people when reconstituted according to the directions and refrigerated for 24 hours.

N.B.: Dairy substitutes - Any dairy substitutes such as coffee whitener and whipped toppings are made from non-dairy foods and should not be used to replace milk.

MEAT, FISH, BIRDS AND EGGS

21. Alternates. Alternates are foods that are rich in protein and iron and can replace meat e.g., eggs, cheese, peanut butter, nuts, seeds, dry peas, beans.
22. Meat, fish, birds and eggs are good sources of protein, iron, niacin, thiamin, riboflavin, vitamin A, vitamin B12 and fat.
23. Frozen meat and fish. Plain frozen meat and fish are much cheaper than prepared items e.g., frozen fish in sauce or TV dinners are twice or three times the price of the equivalent plain items.
24. Canned fish and meat are often less expensive than frozen fish and meat. The best buy for nutrition and cost is canned fish, especially mackerel and sardines. Canned fish can be served in sandwiches,, chowders, casseroles, pies, etc.
25. Processed meat can be prepared in many ways. Shop carefully for processed meats. They can be very expensive when bought pre-sliced. Buy them in bulk and slice the meat yourself.
26. Canned beans and canned meat stews contain less protein than canned fish or meat, but lower prices and practicality made them popular items among consumers. Canned stews and beans can be used occasionally in the family's diet.
27. Canned noodles and dinners and ravioli, spaghetti provide very little protein on their own and must be supplemented by either meat, eggs or cheese if they are to be served as a main dish.
28. Use dry peas and beans in cooking. Dry peas and beans are economical sources of protein and can extend soups and stews.

BANNOCK, BREAD AND CEREAL

29. Dry goods are usually well stocked in food stores in isolated communities.
30. Flour, cereals, rice and noodles provide energy, vitamins B

and some protein.

31. Enriched flour. In Canada white flour must be enriched with iron, thiamin, riboflavin and niacin. Therefore, all baked goods contain these nutrients whether homemade or commercially prepared.
32. Home baking. Selecting enriched or whole grain flour will make homemade baked goods very nutritious. Many wholesome products can be added to home baked products to increase their nutritional value; e.g., powdered milk, wild berries, dried fruits, peanut butter, cheese or fish eggs in bannock.
33. Calcium enriched flour. Flour can also be enriched with calcium. Flour packaged by the Hudson Bay Co. is enriched with calcium and is therefore available to northern communities which have a Bay store.
34. Whole grain cereals, cooked, without sugar. Whole grained cereals are better than refined cereals. Cereals which require cooking are better than ready to eat; e.g., oatmeal is better than Corn Flakes. If choosing ready-to-eat cereals, avoid the sugar coated ones. If in doubt, read the label e.g., Corn Flakes are better than Sugar. Frosted Flakes.
35. Noodles, e.g., macaroni, spaghetti. Most of these products are enriched with B vitamins and iron. The label will tell you which ones are enriched. Enriched noodles, provide better nutrition for your food dollar. Noodles keep indefinitely when stored in the original packages in a dry place.
36. Noodles alone are not a meal. To make a nutritious meal, noodles need to be accompanied by other foods; e.g., macaroni and cheese should be served with meat, fish, hard boiled eggs, or additional cheese.
37. Brown or converted rice. The best rice for price and nutrition is brown rice or parboiled or converted rice. Plain rice, e.g., Uncle Ben's Converted, is cheaper and contains less salt than seasoned rice (Spanish Rice).
38. Bread, bannock, cereals, noodles, rice are good and less expensive than many other foods. Eat them instead of junk food.
39. Other foods. Commercial snack foods like chips, chocolate, pop are high in sugar, oil, salt and calories and are not nutritious. They should be avoided.

HOW TO READ FOOD LABELS

1. An extremely important part of wise food shopping is reading and understanding the information given on food labels.

2. By doing so you can compare foods for quality, price, ingredients, and nutritive values and buy the ones that suit your needs.

3. All food labels must have the name of the food, the net quantity, and the name and address of the manufacturer, packer, or distributor, should the consumer want to contact him.

4. If the food is sold in different forms (for example, green beans can be sold whole or cut), the label must specify what form is in the container.

5. If there is a picture of the food as well, it must depict the food either as it is or as it could look when served.

6. The net quantity is given as a weight or a count if the food is solid. It is given by volume if the food is liquid. If the food is packed in a liquid, the net weight includes the liquid (the weight of the food without the liquid is the drained weight).

7. The list of ingredients must be on all pre-packaged food products.

8. The list of ingredients is one of the most important pieces of information provided by the food label.

9. The ingredients are listed in descending order. The one which weighs the most comes first and so on. It can also be given in percentages, again in descending order. This helps tell you if canned "meat stew" actually has more vegetables than meat or which cereal has the most sugar.

10. While reading the list of ingredients be especially concerned with the amounts of sugar, salt (sodium), and fats. Most nutritionists recommend limited intake of these three ingredients. Unfortunately, most processed foods contain them.

11. How to store the product. Food labels include information on how and where to store the product (if it should not be kept at room temperature).

12. There are two types of Dating systems - coded and open. Coded dates are numbers and letters that, because they are part of a code, can be read only by those who understand the code. These coded dates are often used by supermarkets for rotating their stock. Open dating, on the other hand, is an easily

understood statement of a date that indicates the age of the product to the consumer. The date is accompanied by an explanation of what it means, such as "packaged on" or "best before" this date. If you are unsure of what the date means, ask the store manager. Although a date can appear on any type of food product, they are most often found on perishable foods such as dairy products, baked goods and meats.

13. Best before date. After that date, the product may still be edible, but is not in top form. The Best Before date is not an expiry date. Most products don't have to be thrown away after the best before date except for baby food and infant formula.

14. Artificial flavour. If there is artificial flavouring in the product, the food label will tell you. A picture of a peach or some other natural food on the label does not necessarily mean that the product contains that natural food.

15. Fortified products. Fortification with added vitamins or minerals (nutrients) means that vitamins or minerals are added to a food product that does not normally contain them, or contains it in a relatively small quantity. This is legislated by Health and Welfare Canada - Health Protection Branch; e.g., milk is usually fortified with Vitamin D.

16. Enriched with vitamins and minerals. This means that some of the nutrients that were lost during the processing of a food have been put back into it. Nutrients are added to staple foods that supplied significant amounts of these substances before processing. For example, B vitamins and iron are added to white flour.

17. Substitute foods, such as simulated meat or poultry products, must be nutritionally similar to the foods they are intended to replace.

18. Meal replacements, such as instant breakfasts or weight reduction diet products, must supply essential nutrients in amounts similar to those provided by a meal.

19. Calorie-reduced means that the food has half as many calories as the food it replaces.

20. Carbohydrate-reduced means that the food product has no more than half the normal carbohydrate content.

21. Sugar-free or sugarless means that a carbohydrate-reduced food contains no more than one calorie per 100 grams or 100 millilitres.

22. Caffeine-free means that the product has no caffeine; e.g., caffeine-free coffee, caffeine-free cola.

23. Natural. A term to be especially wary of is "natural". It is used liberally in food advertising, and the tendency is for the price of the food to increase with the use of this particular designation. In Canada, the term has not been officially defined and regulated as to its use. Therefore, natural has no specific meaning on a food label.

24. With the advent of computerized checkout systems, many labels have the universal price code symbol printed on them. This symbol is a pattern formed by numbers and lines of varying weights and lengths that, when passed over the machine, identifies the products to the computer. The computer then registers the price of the food and updates the inventory of the stock of that item. The customer in turn receives a register tape on which all of the items are printed out with their names and prices. Because the prices are stored in the computer, the main worry among consumers is that the stores, hoping to cut costs and workloads, will do away with the practice of pricing individual packages. This would make it difficult, if not impossible, for the consumer to compare prices while shopping.

Material for Teacher Background Information is adapted from NWT Food Guide (Teaching Guide): Regional Nutritionist, Medical Services Branch, NWT Region Nutrition Month Kits (1985 - 1988): Nutrition Liaison Committee of the NWT, Medical Services Branch, NWT Region.