

GRADE 3

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 |

| Nutrient | Country Food Source | Store Food Source |
|-----------------|--|---|
| 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.) |
| 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

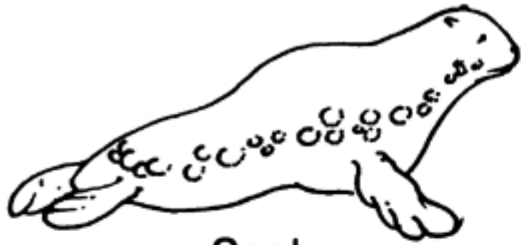
This allows people to quickly identify a food with its food group, e.g., "Milk belongs to the blue group."

N.W.T. FOOD GUIDE
Eat foods from each group every day for health

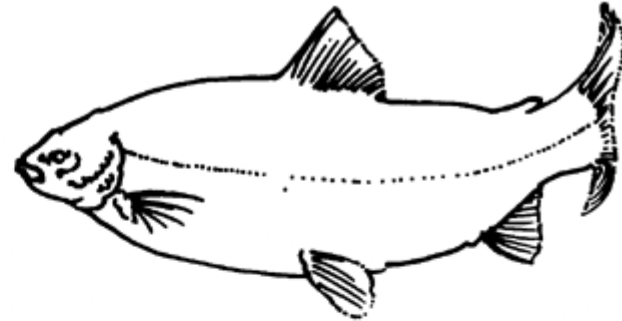


COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

Leader Nutrients: Protein, Iron



Seal



Fish



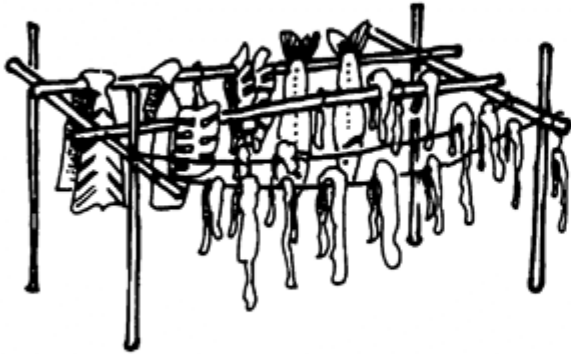
Rabbit



Whale

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

Leader Nutrients: Protein, Iron



Dried Meat and Fish



Caribou



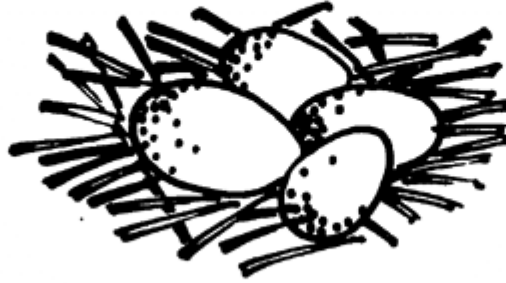
Muskrat

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

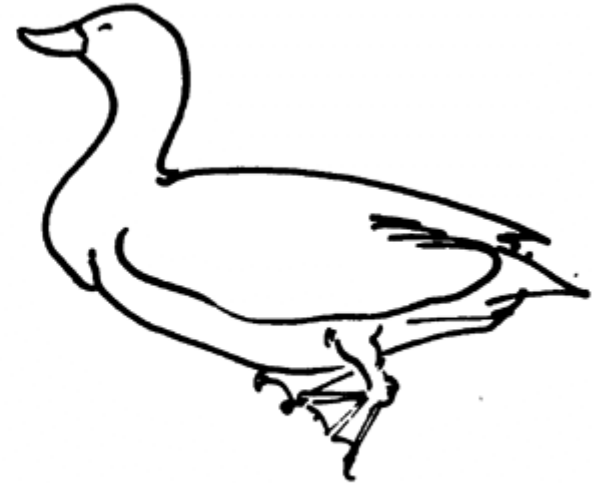
Leader Nutrients: Protein, Iron



Ptarmigan



Eggs



Duck

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



Seaweed



Clover



Dock



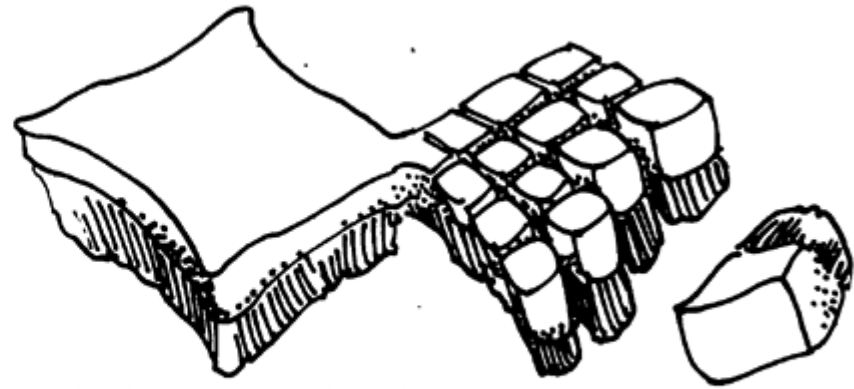
Berries

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin G



Seal Fat

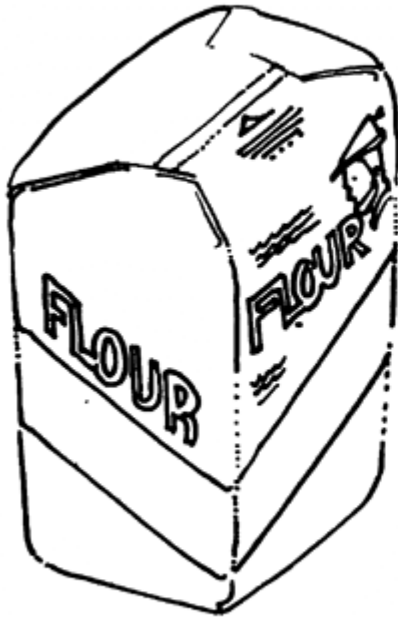


Muktuk

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



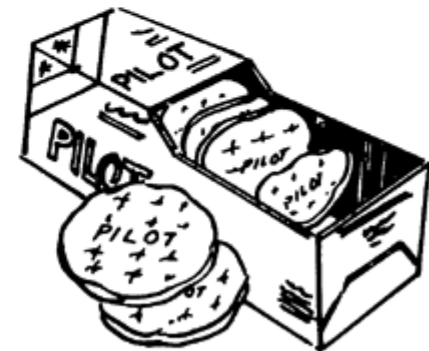
Flour



Oats



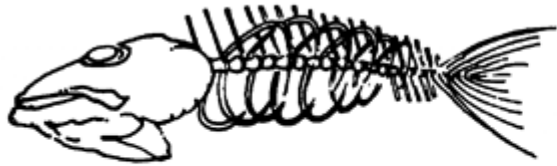
Bannock



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.

MEAL NAMES AND TIMES

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 a: 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.

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, homemade; 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, sugarfree soft drinks, sugarfree 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.



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.



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.



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!



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.

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