

17. A Pizza for the Planet

If we stopped to consider what was hiding under each layer of cheese and the source of each ingredient, we would soon discover that a Hawaiian pizza might come from much farther away than Hawaii. A culinary workshop, without cooking, will allow students to examine the effects of the commercial pizzas that they love to eat on their health and the environment. They will then create a delicious organic and solidarity-based pizza recipe, using fresh, Quebec-grown produce.

Learning Objectives:

To have the students:

- Become aware of the impact of their food choices on the environment and their health.
- Learn a number of basic nutritional concepts that will help them eat a healthier diet and reduce the risk of chronic food-related diseases (diabetes, obesity, etc.).
- Discover new, fresh foods that are grown in Quebec.
- Create and make or prepare a healthy recipe using seasonal Quebec ingredients, and describe the nutritional content.

Materials

- Computer and projector or printed copy of the “Pizza for the Planet” slide show (File C).
- “Pizza for the Planet” slide show (File C).
- 8 copies of each appendix (1, 2, 3, 4 and 5).
- Map of the world and colour pushpins (tacks).
- Pizza recipes brought in by the students or pizza recipe books.
- 8 posterboards, scissors and blue tack.
- Felt pens to do illustrations of pizzas created.

Areas of Learning

English, society and geography.

Did You Know?

- Choosing foods from Quebec helps to create hundreds of jobs and to recognize the work of our fellow citizens, as well as helping to reduce greenhouse gases caused by the transportation of food.
- One meal from a fast food restaurant contains, on the average, twice as many calories as a home-cooked meal. In the U.S., nearly half of all family household budgets is spent on fast food.
- In the last 15 years, obesity rates have risen by more 50% among Canadian children 6 to 11 years old, and 40% among young people ages 12 to 17 years old.

Preparation

- A few days before the activity, ask the students to bring two pizza recipes to class (home-made, from books or Websites).
- Prepare the overhead projector for the presentation.
- Put the map of the world up on the wall.

Presentation

Ask the students questions about their eating habits. What is their favourite meal? What do they eat the most often? Do they know how to cook it? Who makes or sells it? Do they know the ingredients?

Main Activity

- Present the “Pizza for the Planet” slide show to the students.
- Allow some response time before moving on to the next slide.
- After the slide show, designate volunteers to pin tacks on the map at the places of origin of the various ingredients of the pizza. Are the students surprised by the distances travelled? Ask for comments.
- Ask the students: “Did you know what was hiding in your pizza?”
How could we create a new pizza that would have less of a negative impact on our health and the environment? Answer: reduce the number of kilometres travelled and the amount of processing used by choosing local, varied, coloured, in-season and fresh food (, i.e., involving little processing) from the four food groups (See Appendix 1).

- Divide the class into 8 teams and assign a season to each team (2 teams per season). Give each student a piece of posterboard shaped like a slice of pizza, and hand out copies of Appendices 1 to 5.
- Ask the students to invent their own pizza recipe and one that is healthy, environment-friendly and solidarity-based using fresh Quebec produce. For help, they can consult their recipes and the appendices handed out. They must draw a picture of their creation on the posterboard cut in the shape of a slice of pizza and create the recipe based on their culinary knowledge (see Appendix 2). The most original pizza that would have the least negative impact on our health and the environment could be cooked (optional).

Intégration

- After the workshop part of the activity, display the slices of pizza on the wall so as to create two large, four-season pizzas.
- Ask each group to present its pizza and justify its choices and any problems encountered (e.g., difficulty choosing ingredients, ingredients impossible to replace with local produce, etc.). Where do they think that they could buy these foods (ingredients) (supermarket, grocery store, farmers market, specialized grocery store, etc.)?
Hold a vote. Review the recipe of the winning pizza. Is this pizza healthier, more ecological and more solidarity-based than the pizza in the slide show? In what



ways? Is the recipe doable (e.g., was the time to cook each of the various ingredients taken into consideration)? How could it be modified? What are the advantages and disadvantages of choosing healthier, local foods?

- Ask the students to test their recipes, or at a subsequent session, organize a cooking activity or invite a chef to come and do the cooking (optional).

Enrichment

- Print the winning recipe for the students and encourage them to try it at home with their families, then come back and talk about it in class (critique the pizza).
- Ask the students to compare the composition and ingredient sources of frozen pizzas and fast food restaurant pizzas to a home-made recipe (e.g., fat, salt, sugar, additives, nutrients, etc.).
- Redo the activity with other dishes that can be easily adapted to the season, such as soups and salads. Create a small collection of seasonal recipes that could be illustrated, bound together and distributed within the school.
- Organize a (pot luck) buffet for all the students, featuring pizza and other local, in-season foods.
- Do some research on the achievements of the young British chef Jamie Oliver and his success with school food (see References for video in English).

Take Action!

To promote more responsible dietary habits (healthier, more environment-friendly, and fairer), encourage the students, with their families, to:

- Take part in the international “Slow Food” movement and its activities:
<http://www.slowfoodquebec.com>
- Demand that their grocers (letter, petition, etc.) give preference to and promote in-season Quebec produce and food products.
- When dining out, give preference to small local restaurants, rather than fast food chain restaurants.
- Ask for drinking water fountains to be put in near the juice and soft drink dispensers.
- In summer and fall, as often as possible, buy fruits and vegetables directly from farmers by going to farmers markets (public markets) or farms in their area or by becoming community supported agriculture (CSA) partners: <http://www.equiterre.org/agriculture/paniersBios/index.php>

Références

- Document *Quinze bonnes raisons de manger bio-local* (see introduction to kit, in “other documents” folder”).

- **Cooking videos featuring chef Jamie Oliver (in English):**

- <http://www.youtube.com/watch?v=NQSRsY8s3kM&feature=related>

- <http://www.youtube.com/watch?v=kFkAszCA9dI>

- <http://www.youtube.com/watch?v=pkht3nolK0E&feature=related>

- Happy Days Tour Live! (2001)

Appendix 1 🍅 Eating Healthier – Nothing Could be Simpler!

The following are 4 simple and practical tips to remember that will help you eat food that's good for your health:

1. Eat 5 to 10 portions of fresh fruits and vegetables every day. A diet with lots of variety and that is rich in fresh fruits and vegetables helps prevent chronic food-related illnesses (obesity, diabetes, etc.) and can even reduce the risk of cancer. Fruits and vegetables are rich in fibre, vitamins, minerals, antioxidants and phytochemicals.

2. Eat a diversity of fresh fruits and vegetables: Each variety of fruits and vegetables offers different nutritional values (see comparison below) and supplies our body with distinctly different quantities of fibre, vitamins, minerals, antioxidants and phytochemicals. So we need to have as much colour as possible in our plates and eat foods that are natural, i.e., that have undergone little of no processing.

Example: 1 cup (1 portion) of:

- Boston lettuce contains, among other things, 5 calories, 130 g of potassium and 35% Vitamin A.
- Iceberg lettuce contains, among other things, 10 calories, 80 g of potassium and 6% Vitamin A.



3. Colour Your Plate. In 2003, the World Food and Agriculture Organization stated that “the more colour there is in your plate, the better it is for your health.” Indeed, in order to ensure the most nutrition and phytochemicals possible in your diet, it is important that you eat at least one dark green vegetable and one orange vegetable every day (see box below). Also, to vary your dietary intake even further, it is important that you eat daily one fruit or vegetable from each colour of the rainbow (e.g., red, yellow, orange and green, etc.).

Examples of dark green vegetables grown in Quebec: broccoli, spinach, rapini, kale, Savoy cabbage, Brussels Sprouts, asparagus, Swiss chard, green beans, seaweed, edamame, bok choy, okra (gumbo), fiddlehead, rocket, mustard leaves, watercress, Romanian lettuce, zucchini, chicory, green pepper, etc.



Appendix 1 🍅 Eating Healthier – Nothing Could be Simpler!

4. Eat natural food: To maximize nutritional intake and reduce the risk of chronic food-related diseases (diabetes and obesity), it is preferable to prepare fruits and vegetables with little or no fat, sugar or salt (see box below). It is also recommended that we eat fresh fruits and vegetables (avoid juices, opt for produce grown as locally as possible, etc.). Also, limit your consumption of foods with long lists of ingredients including the many food additives that exist (see box below). Last, by giving preference to organic fruits and vegetables, we can reduce our exposure to pesticides.

Examples of orange vegetables grown in Quebec: carrot, pumpkin, squash, turnip and sweet potato.

Limit or avoid eating foods with a long list of ingredients. Especially avoid the following ingredients or categories of ingredients. Also, since ingredients on labels are listed in order of quantity (biggest quantities at the top of the list), be sure that the following ingredients are not at the beginning of the list of ingredients:

- Lipids and Fats: shortening, oil, fat, butter, suet (animal fat), esters, glycerides, glycerol, etc.
- Salts: salt, monosodium glutamate, baking powder, sodium bicarbonate (baking soda), brine, etc.
- Sugar and its derivatives (avoid words ending in “ose” and “ol”): sugar, fructose, sucrose, maltose, lactose, syrup, dextrose, maltitol, lactitol, sorbitol, mannitol, etc.
- Food additives: *
 - Antioxidants: BHA, BHT, propyl gallate
 - Whitening agent: sulfite
 - Preservatives: monosodium glutamate (MSG), nitrite, nitrate
 - Artificial colouring: caramel, sunset yellow, colorant 5, etc.
 - Artificial sweeteners: acesulfame K, saccharine, aspartame



While most additives are not considered to pose a serious health risk, experts are concerned with the long-term effects of some additives (see above box) that are often found in the following food items:

- Food items that are coloured, processed, fried and claiming to be low-calorie, soft drinks, pastries, cookies, crackers, cereals, delicatessens, dried fruit, bottled lemon juice, soups, margarine, fried food items, and wines.

***Food additive :** Any chemical substance added to a food product during its transformation to modify its characteristics (ex. : appearance, texture, storage time, etc.)



Appendix 2 🍅 Eating Healthier – Nothing Could be Simpler!

Names of teammates _____

Season _____

Pizza Recipe

Name of the pizza _____

Preparation : easy 🍅 intermediate 🍅 difficult 🍅

Number of portions _____ Preparation time _____

Ingredients (do not forget the quantities!):

Golden rules for healthy, ecological and tasty ingredients!

1. Are the ingredients produced in Quebec?
2. Are they grown or available during the season that you chose?
3. Are they fresh or already processed?
4. Do they contain salt, sugar or fat at the beginning of the list of ingredients?
5. Does the list of ingredients include any food additives?

Preparation

Think each step carefully through. For example, are you going to make your own pizza pasta, use ready-made pasta or use pita bread? Do the ingredients selected need to be seasoned, or cooked ahead of time (e.g., pizza with chicken)? Etc.



Appendix 3 🍅 Fresh Quebec Produce by Food Group*

Fruit

Blueberry
Strawberry
Raspberry
Honeydew melon
Peach
Plum
Cantaloupe
Watermelon
Pear
Grape
Cape gooseberry
(ground cherries)
Blackberry
Apple
Rhubarb



Vegetables and Legumes

| | |
|--------------------------------|--------------------------|
| Garlic | Broccoli |
| Savoy cabbage | Green cabbage |
| Endive | Kidney bean |
| Parsnip | Radish |
| Artichoke | Carrot |
| Chinese cabbage | Pumpkin |
| Fennel | Lettuce |
| Red and green peppers | Soy |
| Asparagus | Celery |
| Kale | Cucumber |
| Black bean | Sweet corn |
| Leek | Prickly lettuce |
| Eggplant | Celery root |
| Cauliflower | Summer squash |
| Spinach | Cantaloupe |
| Snow pea | Rutabaga (turnip) |
| Swiss chard | Chicory |
| Nappa cabbage | Winter squash |
| Broad bean | Turnip |
| White turnip | Tomato |
| Beet | Brussels sprouts |
| Red cabbage | Shallot |
| Fresh beans (yellow and green) | Green onion |
| Radicchio | Zucchini (summer squash) |

Breads and Cereals

Oatmeal
Spelt
Barley
Soy
Wheat
Corn
Rye

Dairy Products and Alternatives

(There exist more than 120 different types of cheese that are made in Quebec)

Cow's milk (skim, 1%, 2%, 3.25%)
Soy drink
Goat's cheese
Yogurt
Goat's milk
Ewe cheese
Cow's cheese
Tofu

Meat, Poultry, Fish and Sea Foods

| | |
|-----------|--------------------------------|
| Lamb | Turkey |
| Duck | Fish |
| Rabbit | Veal |
| Chicken | Sheep, ewe |
| Beef | Big game |
| Goat | Pork (ham, bacon) |
| Goose | Sea foods |
| Buffalo | (e.g., crab, scallop, lobster) |
| Deer, elk | |
| Moose | |
| Cow | |
| Heifer | |



*This is not an exhaustive list.

Appendix 1 🍎 Seasonal Produce Calendar*

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|--|------|------|------|-------|-----|------|------|------|-------|------|------|------|
| Apricot  | | | | | | | × | × | | | | |
| Asparagus  | | | | | × | × | × | | | | | |
| Eggplant  | | | | | | | × | × | × | × | × | |
| Swiss chard  | | | | | | × | × | × | × | × | | |
| Beet  | × | × | × | × | × | × | × | × | × | × | × | × |
| Blueberry  | | | | | | | | × | × | × | | |
| Broccoli  | | | | | | | × | × | × | × | × | |
| Cranberry  | | | | | | | | | × | × | × | × |
| Cantaloupe  | | | | | | | | × | × | | | |
| Carrot  | × | × | × | × | × | × | × | × | × | × | × | × |
| Celery  | | | | | | | × | × | × | × | × | |
| Celery root  | × | × | × | × | × | | | | | × | × | × |
| Cherry  | | | | | | × | × | × | | | | |
| Cape gooseberry  | | | | | | | | × | × | | | |
| Mushrooms  | × | × | × | × | × | × | × | × | × | × | × | × |
| Cabbage  | × | × | × | × | × | × | × | × | × | × | × | × |
| Brussels sprouts  | | | | | | | | × | × | × | × | × |
| Cauliflower  | | | | | | | | × | × | × | × | |
| Pumpkin  | | | | | | | | | × | × | × | |
| Cucumber  | | | × | × | × | × | × | × | × | × | × | |
| Squash  | × | × | | | | × | × | × | × | × | × | × |
| Chicory  | × | × | × | | | | | | | | × | |
| Spinach  | | | | | × | × | × | × | × | × | × | × |

* This list is not exhaustive. Seasonal fruits and vegetables vary according to region and climate.

Appendix 1 🍅 Seasonal Produce Calendar

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|--|------|------|------|-------|-----|------|------|------|-------|------|------|------|
| Fennel  | | | | | | × | × | × | × | | | |
| Strawberry  | | | | | | × | × | | | | | |
| Raspberry  | | | | | | | × | × | × | × | | |
| Bean  | | | | | | | × | × | × | × | | |
| Lettuce  | | | | | | | | × | × | × | | |
| Corn  | | | | | | | × | × | × | × | | |
| Melon  | | | | | | | | × | × | × | | |
| Onion  | × | × | × | × | × | × | × | × | × | × | × | × |
| Parsnip  | × | | | | | | | | | | × | × |
| Peach  | | | | | | | × | × | × | | | |
| Leek  | × | × | × | × | × | × | × | × | × | × | × | × |
| Pear  | × | × | × | × | | | × | × | × | × | × | × |
| Pepper  | | | | | | | × | × | × | | | |
| Apple  | × | × | × | × | × | × | × | × | × | × | × | × |
| Potato  | × | × | × | × | × | × | × | × | × | × | × | × |
| Plum/ Prune  | | | | | | | × | × | × | × | | |
| Radish  | | | | × | × | × | × | × | × | × | × | |
| Grape  | | | | | | | | × | × | × | | |
| Rhubarb  | × | × | × | × | × | × | × | × | | | | |
| Rutabaga  | × | × | × | × | × | × | × | × | × | × | × | × |
| Tomato  | | | × | × | × | × | × | × | × | × | × | |
| Sunchoke  | × | × | | | × | | | | | | × | × |

Annexe 5. 🍅 Local Cheese Quick List

Cow cheese, goat cheese, ewe cheese, fresh cheese, soft cheese, hard cheese, etc. More than 300 different cheeses are produced in Quebec and enjoy an excellent reputation world-wide! Take the challenge and try to incorporate them into your pizza recipe. Satisfaction guaranteed!

Fresh Cheese

Type - Goat cheese: Le Capri...cieux

Type - Ricotta cheese: Abbaye de Saint-Benoît-du-Lac ricotta cheese

Soft Cheese

Type – Brie: SOMO Brie au Saumon Fumé, Chevalier Brie Triple Crème

Type – Camembert: Grand Camembert Vaudreuil, Le Champayeur*

Type – Feta: La Moutonnière

Soft Cheese

Type-Blue cheese: Bleu Bénédictin, Le Rassembleu*

Semi-Hard Cheese

Type - Havarti: Havarti Finbourgeois

Type - Raclette: La Raclette Champêtre

Type – Beer flavoured: Le Clos St-Ambroise

Type - Aromatized: Oka aux Champignons

Type - Mozzarella: Prestigio

Type – Raw milk cheese: Le Baluchon*

If you are looking for “P’tit Québec” cheese, you should be aware that this is not a cheese made in Quebec, but rather, a registered trademark of the American food giant Altria Group under the Kraft banner!

Hard Cheese

Type - Cheddar: Cheddar de L’Île-aux-grues, Cheddar La Chute à l’Ours*

Type - Gouda: Gouda Anco

Type - Swiss: Suisse Chaliberg

Type – Parmesan: L’Ancêtre Parmesan

Type - Emmental: Emmental l’Alpinais, L’Ancêtre Emmental*

Type - Gruyère: Le Moine

Other Quebec cheeses? Why not try ...Cheddar Troubadour, Cumulus, Fêtard, Fleurdelysé, Grand Chouffe, Petits Vieux, Pied-de-vent, Sorcier de Missisquoi, Tomme de Monsieur Séguin, Wabasse, Fredondaine, Diable aux Vaches, Cru des Érables, Migneron de Charlevoix or Duo du Paradis, etc.?