

13. Soup's On! Jeopardy

What are the impacts of our food choices on our health, the environment and society? Thanks to a quiz and a questionnaire-game, students will test their knowledge and explore what they can do to make more responsible food choices.

Learning Objectives

Have students:

- Familiarize themselves with and review the main concepts presented in this educational kit.
- Understand the impacts of their food on the environment and commit to making healthier and more environmentally and socially responsible food choices.
- Identify ways to reduce the risk of developing diseases such as type-2 diabetes and other food-related diseases.

Materials

- A copy of the Diabetes Information Sheet (Appendix 1).
- A copy of the Quiz Answer Sheet (Appendix 2).
- One copy per student of the Soup's On! Jeopardy Quiz Questions (Appendix 3).
- A copy of the Jeopardy Questions and Answers (Appendix 4).

Preparation

- Familiarize yourself with the diabetes info sheet (Appendix 1), quiz and jeopardy game (Appendix 2 and 3).

Main Activity

- Tell students they will test their knowledge, first by responding to a quiz and then by participating in a questionnaire-game.
- Distribute a copy of the quiz to each student (Appendix 1). Answer the quiz as a group and use the answer sheet (Appendix 2) to provide additional information.
- Give 10 min. to the students to memorize the 30 quiz questions in preparation for the jeopardy game. Explain the rules of this questionnaire-game (see below).
- **Jeopardy rules:** Two groups have to take turns choosing one of the five categories of questions (agriculture, agro-environment, social impacts, economy and

Did you Know?

- According to 2006 statistics, in Quebec, each resident produced more than 400 kg of waste in one year.
- While hunger is increasing in Africa, a Canadian study reveals that, over the past 15 years, obesity rates among 6 to 11-years old have risen more than 50% and 40% among 12 to 17-years old.
- Mainly because of the rise of obesity, the International Diabetes Foundation (IDF) predicts that by 2025, 14% of the population in Canada, compared with 5% in China, will have diabetes.



health). Using the table in Appendix 4, the animator gives the answer to a question from the chosen category and the group who chose the category has to name the question the answer was answering. For example, in the health category, the animator could say : "Health category. Response: There are two" and the group should reply: "How many types of diabetes are there?" or "The number of types of diabetes". A point is given for each correct response. If the team does not answer correctly, the opposing team has the right to answer. A bonus point can be given to any team able to build on or explain the answer once the question is correctly formulated (ex.: more and more young people are developing type 2 diabetes).

- After 10 min. of memorization, collect the filled out quiz and form two teams. Start the jeopardy game (Appendix 4).

Integration

Ask the class:

- Did they like the game?
- Did they learn new things?
- What ideas were reviewed?
- How can we make healthier, more ecological and socially responsible food choices?
- Who is most at risk for developing diabetes?
- How can the risk of developing type 2 diabetes be reduced?

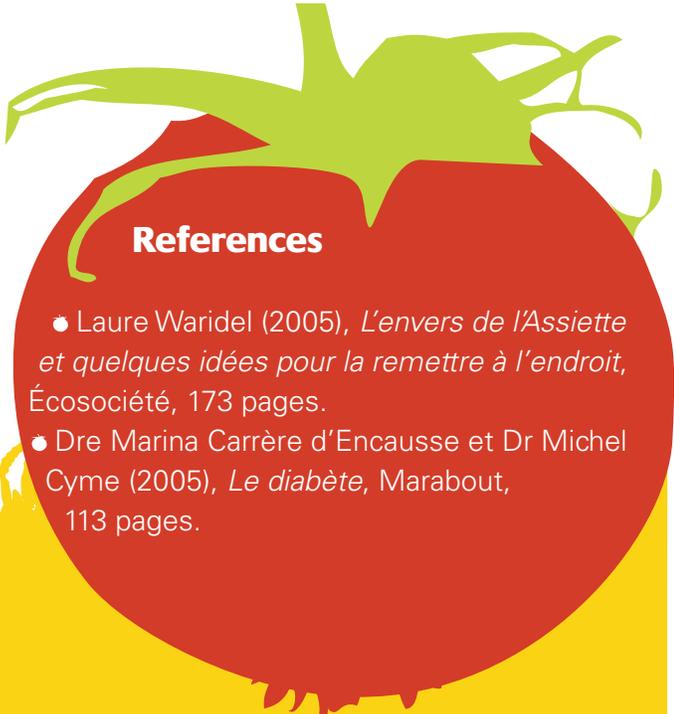
Enrichment

- For homework, ask students to analyze their lunch. Ask them to identify and to make at least two changes so that their next day's lunch is healthier, more ecological and more socially responsible.
- Ask students to research chronic food-related diseases (diabetes, obesity, etc.) and to identify preventive actions they can adopt to reduce their chances of contracting them.

Take Action!

To encourage more responsible eating, encourage students and their family to:

- Spread their newly acquired knowledge by organising information kiosks, awareness campaigns, etc.
- Ask the school principal and/or the cafeteria manager to offer a healthier menu and to give priority to local produce served in reusable dishes.
- When eating out, choose small restaurants in the neighbourhood instead of fast food and commercial chains.
- Calculate their ecological footprint: <http://www.myfootprint.org/en>



References

- Laure Waridel (2005), *L'envers de l'Assiette et quelques idées pour la remettre à l'endroit*, Écosociété, 173 pages.
- Dre Marina Carrère d'Encausse et Dr Michel Cyme (2005), *Le diabète*, Marabout, 113 pages.

Appendix 1. 🍎 Diabetes Information Sheet

What is Diabetes?

- 1.** Diabetes is a disease in which the body cannot properly use the energy (glucose – a kind of sugar), or blood sugar, that it takes from the food it eats. - Canadian Diabetes Association
- 2.** Failure to metabolize carbohydrates caused by insufficient pancreatic insulin action. It is characterized by hyperglycaemia and sometimes by the presence of sugar in urine. There are two types of diabetes. The disease can be hereditary or caused by obesity, unhealthy eating habits or autoimmune disorders. It can begin as early as childhood. To control diabetes, one needs to control of the amount of sugar in the blood and to search for sugar in the urine. - Le Petit Larousse illustré 2008.

There are two types of diabetes:

- **TYPE 1 DIABETES** manifests itself when the body produces little or no insulin. This type of diabetes is hereditary and **CANNOT BE AVOIDED**. Only 5% to 10% of the people suffering from diabetes have this type of **UNPREVENTABLE** diabetes which, to date, cannot be cured.
- **TYPE 2 DIABETES** manifests itself when the body cannot use the insulin it produces efficiently or when it fails to produce enough insulin. This is the most common type of diabetes. Obesity, unhealthy eating habits and sedentary lifestyles are the leading causes of disease. It can easily be **PREVENTED AND CONTROLLED** by adopting a healthy diet and an active lifestyle. Medication or insulin injections can also help keep this type of diabetes under control but are not always necessary.

If diabetes is not treated or kept under control, it can lead to other major health problems, including:

- Heart disease
- Strokes (cerebral vascular accident)
- Kidney disease
- Blindness
- Nerve damage
- Limb amputation



Appendix 1. 🍅 Diabetes Information Sheet

Despite the fact that type 2 diabetes affects more and more people around the world, people from the following backgrounds are more at risk than others:

- People of Native American, African, Latin-American or Asian descent
- People from lower income families: In Canada, people with the lowest incomes tend to be the most affected by this disease. Around the world, it is predicted that by 2025, 80% of people that will develop type 2 diabetes will come from developing countries.

How can you prevent diabetes and reduce your risks of developing it?

- Be active
- Eat well!:
 - Make sure to eat at least 3 of the 4 main food groups at each meal (grain products, fruits and vegetables, meat and alternatives, milk products).
 - Eat lots of fibre-rich foods. In addition to reducing our appetite, fibres reduce our cholesterol levels and our chances of developing heart disease. Choose whole wheat breads, fresh fruits and vegetables, legumes, grains, etc.
 - Avoid fats: choose low-fat foods and eat less processed foods and sweet treats.
 - Don't eat too much salt: beware of chips, frozen meals and processed foods.
 - If you drink alcohol, do it in moderation



Appendix 2. 🍅 Quiz Answer Sheet

Food Processing

1. If a loaf of bread sells for \$1, what proportion of the selling price does the wheat producer receive?

- a) 3 to 7%
- b) 15 to 20%
- c) 35 to 40%

(a) Where does the rest go? The rest is split between the baker, the transporter and the retailer.

Social Impact of Agriculture

2. What is rural exodus?

- a) The migration of urban people to the countryside.
- b) The migration of rural people to the city.
- c) The migration of people from developing to developed countries.

(b) In certain regions of Quebec, such as Saguenay-Lac-Saint-Jean, it is the equivalent of a busload of young people that leaves the region to live in Montreal each month.

3. Is Quebec seeing a rise or decline of farms?

- a) There are more farms in Quebec everyday as more than two farms start-up each day.
- b) There is no growth or decline of farms in Quebec.
- c) Quebec is losing farms. Approximately one farm disappears each day in Quebec.

(c) Every year, there is less and less farms in Quebec. On average, according to Statistics Canada, five to six farms disappeared each week in Quebec from 2001-2006.

4. How many seasonal foreign workers migrate to Quebec each year to harvest fruits and vegetables?

- a) Approximately 250
- b) Approximately 1,000
- c) Approximately 2,500

(c) In 2007, nearly 2,670 seasonal workers came to Quebec to work on our farms. The majority of workers come from Latin America. While they often earn more money in Canada than in their native country, they are sometimes exposed to difficult living conditions (harassment, poor housing conditions, repeated exposure to pesticides, difficult access to health care, etc.)



Appendix 2. 🍅 Quiz Answer Sheet

5. What is the average hourly wage that a seasonal migrant farm worker receives in Quebec?

- a) \$8.50 per hour or less
- b) Between \$8.50 and \$10 per hour
- c) More than \$10 per hour

(a) Despite the fact that they are often overqualified, migrant workers in Quebec earn, on average, \$8.50 per hour, the minimum wage in Quebec. Even though this salary is often greater than what they would earn in their native country, it is low given the cost of living in Canada and unfair given that a Quebec worker would normally earn a higher salary for the same work.

6. What is Community Supported Agriculture (CSA)?

- a) A system that promotes intensive agriculture in rural regions, in order to allow farmers to increase their farm size.
- b) A system that allows organic farmers to receive payments from consumers in advance, in return for a basket of organic vegetables delivered to a drop-off point each week.
- c) A system that promotes the use of genetically modified foods to increase the productivity in the fields and to raise the income of farmers.

(b) Amongst other things, CSA (also called “organic food basket”) guarantees an income to farmers early in the season while also giving them the opportunity to plan their production and harvest in advance. Meanwhile, citizens have the privilege to be have a family farmer, to know him and to know where their food comes from.

Agriculture and Agro-Environment

7. Of the following answers, which one only lists foods grown in Quebec?

- a) Potatoes, squash and kiwi
- b) Blueberries, peach and apple
- c) Raspberry, watermelon and ground cherry

(c) Though some varieties can be grown here, most kiwis cultivated in the world come from New Zealand and South America. Peaches, formerly cultivated in Quebec, now primarily come from Ontario. Raspberries, ground cherries and watermelons (ex.: Montreal melon) have a long history in Quebec’s agriculture.



Appendix 2. 🍅 Quiz Answer Sheet

8. What is organic agriculture?

- a) A method of agriculture that uses neither pesticides nor fertilizers.
- b) A method of agriculture that does not use pesticides, chemical fertilizers or GMOs.
- c) A method of agriculture that uses pesticides and chemical fertilizers.

(b) In Québec, organic agriculture forbids the use of pesticides, chemical fertilizers, herbicides, sewage sludge, genetically modified seeds, growth hormones, antibiotics and the overpopulation of animals in a closed building.

9. In which of Quebec's 17 regions are the most flowers and hardy perennials grown, and therefore, can many greenhouses be found?

- a) Montérégie
- b) Gaspésie
- c) Laval

(c) Laval is close to a large urban population to which it can sell beautiful and fresh flowers!

10. Which cereal is the most cultivated in Quebec?

- a) Wheat
- b) Barley
- c) Corn

(c) The majority of corn grown in Quebec is used to feed livestock.

11. What type of agriculture doesn't allow the use of genetically modified organisms (GMO)?

Organic agriculture

12. What are the three main elements that define the Green Revolution?

The use of pesticides and chemical fertilizers

Mechanization of agriculture

Crop selection

13. Name at least two negative impacts that intensive conventional agriculture has on the environment.

Soil pollution, water pollution, loss of biodiversity and GMO contamination.



Appendix 2. 🍅 Quiz Answer Sheet

14. Is it easy for a small-scale Quebec farmer to financially thrive if he practises intensive conventional agriculture?

No. Competition is more and more fierce in this sector. Furthermore, conventional agriculture constantly pushes farmers to buy new equipment and to use new and costly chemical products, forcing many to go into debt and/or to sell and lose their farm.

15. Which of the following fertilizers can be used for organic agriculture?

- a) Compost
- b) Liquid manure mud derived from pig farms
- c) Fertilizers derived from petroleum products

(a) Compost, a natural fertilizer. Organic agriculture forbids the use of chemical fertilizers and liquid pig manure. The latter, frequently used by conventional farmers, is largely responsible for the proliferation of blue-green algae in lakes.

16. Is organic agriculture backwards and closed to new technologies?

No. Methods used by organic farmers constantly improve. On average, yields in organic agriculture are in the order of 80% to 90% of those of conventional agriculture. In the long run, yields in organic agriculture are superior to those of conventional agriculture given the soil and environmental improvements that it also brings.

17. Does intensive conventional agriculture produce much higher yields than organic agriculture?

No. Methods used by organic farmers are constantly improved. On average, yields in organic agriculture are in the order of 80% to 90% of those of conventional agriculture. Overtime, due to the soil and environment improvements it brings, yields in organic agriculture are superior to those of conventional agriculture.

18. What does the 3N-F acronym stand for?

- a) Nitrates, Numerous, New, Farming
- b) Not packaged, Not far, Natural and Fair
- c) New Fertilizers, New pesticides, New GMO, Fast money

(b) 3N-F's stands for Naked, Not-far, Natural and Fair. It is an acronym to keep it mind when trying to make more responsible food choices. It encourages us to choose less packaged, more local, more natural and fresher foods that are cultivated and sold in a way that is fair for the farm workers and farmers.



Appendix 2. 🍅 Quiz Answer Sheet

19. On average, how many does our food travel from the field to our plate?

- a) 100 km
- b) 1000 km
- c) 2500 km

(c) 2500 km. On average, the food that we eat in Quebec travels 2,400 to 4,000 km from field to plate (these figures don't count the km that our food travels from our plates to landfills).

Health

20. How many types of diabetes are there?

- a) There are five types
- b) There is one type
- c) There are two types

(c) Type 2 diabetes, which is preventable and intimately linked with our eating and lifestyle habits, is on the rise. Once mostly found in adults, rates are rapidly increasing amongst young people and kids.

21. Which type of diabetes can a person develop due to their obesity?

Type 2 diabetes, which is not hereditary.

22. What can we do to reduce the risk of getting type 2 diabetes?

- a) Eat more
- b) Exercise
- c) Eat well!

b) and c) Having an active lifestyle, eating a well balanced diet (low-fat, low-salt, low sugar, high-fibre) and reducing alcohol intake are the best ways to improve our health and to reduce the risks of developing diabetes.

23. Name at least one of the health problems that diabetes can cause if not treated.

Heart disease, stroke (cerebral vascular accident), kidney disease, blindness, nerve damage, limb amputation.

24. What is the daily nutritive requirement in kilocalories?

- a) 2300 kilocalories
- b) 2600 kilocalories
- c) 3200 kilocalories



Appendix 2. 🍅 Quiz Answer Sheet

25. What is the average amount of energy (in kilocalories) eaten by Canadians every day? 2800 kilocalories (in 2002, according to Statistics Canada). Another alarming fact in Quebec: in addition to eating too many calories and not enough vegetables, more than 35% of the calorie intake of a large majority of teens comes from lipids (fat).

26. Worldwide, how many people suffer from malnutrition?

- a) 200 000 b) 800 000 c) 1.5 million

27. In what region of the world is malnutrition increasing and getting worse?

- a) Asia b) Africa c) South America

Economy

28. What is or how is *dumping* defined?

- a) Dumping refers to a set of practices that consists of letting developing countries sell their own products to other countries, so that they can become richer.
b) Dumping refers to a set of practices that consists of exporting goods at an abnormally low price, to get rid of large quantities of extra products or to compete with similar goods or services offered in one or more foreign markets.
c) Dumping refers to a set of practices that consists of selling products with a very high price, to earn a lot more money.

29. Which countries practice dumping in poorer countries (ex.: in Mexico and Africa)?

United States (ex.: corn sold to Mexico) and several European countries (mainly in Africa). Dumping makes it very hard for small farmers to compete and to sell their products in their respective countries.



Appendix 2. 🍎 Quiz Answer Sheet

Citizen Action

30. Which one of the following options would you say is a more responsible food choice, that is a healthier, more ecological and fair food choice?

- a) Buying an apple from New Zealand
- b) Buying an apple from a local producer at a farmer's market
- c) Buying a well-wrapped candied apple

(b) Imagine! The apple from New Zealand travelled more than 15,000 km to get here. Think of all the greenhouse gases released! Meanwhile the candied apple is very high in sugar and the wrapping will end up in a landfill where it will stay for many years to come. Buying locally-grown products directly from farmers is the best way to make sure the farmer gets a fair price for his products.

31. What can we do as citizens and consumers to support farmers in Quebec and make sure we don't lose our farms?

Buy food grown in Quebec! As directly as possible from the farmer!



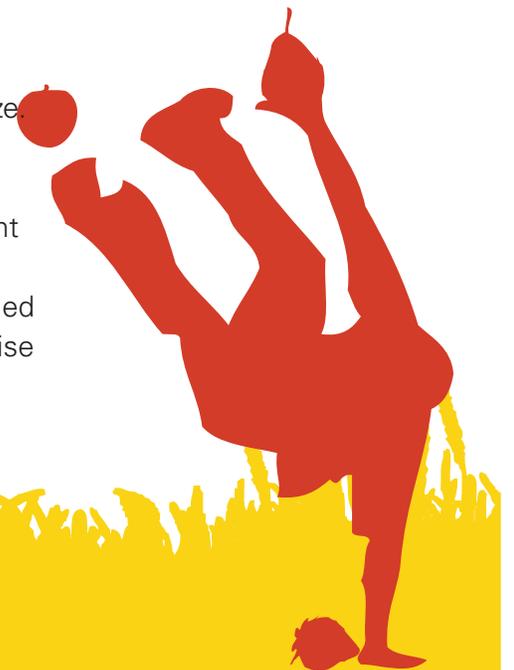
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 - b) There is no growth or decline of farms in Quebec.
 - c) Quebec is losing farms. Approximately one farm disappears each day in Quebec.
- 4.** How many seasonal foreign workers migrate to Quebec each year to harvest fruits and vegetables?
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 - b) Approximately 1,000
 - c) Approximately 2,500
- 5.** What is the average hourly wage that a seasonal migrant farm worker receives in Quebec?
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12. What are the three main elements that define the Green Revolution?

13. Name at least two negative impacts that intensive conventional agriculture has on the environment.

14. Is it easy for a small-scale Quebec farmer to financially thrive if he practises intensive conventional agriculture?

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Appendix 3. 🍅 Soup's On! Jeopardy Quiz Questions

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29. Which countries practice dumping in poorer countries (ex.: in Mexico and Africa)?

Citizen Action

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31. What can we do as citizens and consumers to support farmers in Quebec and make sure we don't lose our farms?



Appendix 4. 🍅 Jeopardy Questions and Answers

| Agriculture | | Agro-Environment | |
|--|---|--|---|
| Question | Answer | Question | Answer |
| Corn | What is the main cereal grown in Quebec? | Compost | Name a fertilizer that can be used for organic agriculture. |
| Raspberry, watermelon, and ground cherry | Name foods grown in Quebec. | Not packaged, Not-far, Naturel and Fair | What does the acronym 3NF stand for? |
| Use of pesticides and chemical fertilizer, mechanization of agriculture and crop selection | Name three main elements that define the Green Revolution. | 2500 km | On average, how many kilometres does our food travel from field to plate? |
| Laval, which also explains why it has many greenhouses | What is the average hourly wage that a seasonal migrant farm worker receives in Quebec? | Soil pollution, water pollution, loss of biodiversity and contamination by GMOs | Name a few negative impacts that conventional agriculture has on the environment. |
| No, thanks to new methods, organic agriculture yields are now in the order of 80% to 90% of those of conventional agriculture. | Are yields much higher in conventional agriculture than in organic agriculture? | A type of agriculture that does not allow the use of pesticides, chemical fertilizers or genetically modified organisms (GMOs) | What is organic agriculture? |



Appendix 4. 🍅 Jeopardy Questions and Answers

| Social Impacts | | Economy/Citizen Action | |
|---|--|---|---|
| Question | Answer | Question | Answer |
| A system that allows organic farmers to receive funding in advance from consumers, in exchange for delivery of weekly organic vegetable basket. | What is community supported agriculture (CSA)? | Buy foods grown in Quebec, as directly as possible from the farmer (public market, CSA, etc.)! | What can we do as citizens and consumers to support farmers in Quebec and make sure we don't lose our farms? |
| Quebec is losing farms. Approximately one farm disappears each day in Quebec. | Is Quebec seeing a rise or decline of farms? | United States and several European countries routinely use this practice. | Which countries practice food dumping in poor countries (ex.: in Mexico and Africa)? |
| A term used to define the migration of the rural population to the cities. | What is rural exodus? | A set of practices that consists of exporting goods at an abnormally low price, to get rid of large quantities of extra products or to compete with similar goods or services offered in one or more foreign markets. | What is food dumping? |
| \$8.50/hour or less, which is equivalent to the minimal wage | What is the average salary received by seasonal migrant agricultural workers in Quebec? | No. Competition is more and more fierce and costly investments are more frequent in conventional agriculture which makes this model of production difficult for small-scale farmers. | Is it easy for small-scale farmers in Quebec to financially thrive if they practice conventional agriculture? |
| Approximately 2500 workers | How many seasonal migrant workers come to Quebec each year to harvest fruits and vegetables? | | |

Appendix 4. 🍅 Jeopardy Questions and Answers

| Health | |
|--|---|
| Question | Answers |
| One the ways is to eat more healthy foods, that is, to choose fresh and unprocessed foods and to avoid foods that are rich in fat, salt and sugar. | What can we do to reduce the risk of developing type 2 diabetes? |
| Heart disease, strokes (cerebral vascular accident), kidney disease, blindness, nerve damage and limb amputation. | Name a few health problems that diabetes can cause. |
| Type 2 diabetes (a type that is not genetically transmitted). | Which type of diabetes can a person develop due to obesity ? |
| There are two types. | How many types of diabetes are there? |
| 2300 kilocalories. | What is the daily nutritional requirement in kilocalories? |
| 2800 kilocalories (in 2002, according to Statistics Canada). | What is the average amount of energy (in kilocalories) consumed per day by Canadians? |
| 800,000 people. | How many people suffer from malnutrition in the world? |
| Unlike in other continents, in Africa, the percentage is still increasing. | In which region of the world is malnutrition increasing and getting worse? |

