

Go! Go! Go Bananas! Food Choice Matters; Global versus Local Foods

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(Summer 2014)

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Suggested Subject Area(s):

Social Studies 8, 9, 10

Foods and Nutrition 8, 9, 10, 11, 12

Physical and Health Education 8, 9

Planning 10

Summer Institute for Educators 2014

Since 1997, the BC Agriculture in the Classroom Foundation has partnered with the University of British Columbia's Faculty of Education's Office of External Programs; The Department of Curriculum and Pedagogy to deliver a Summer Institute; a third year level course in curriculum design. Participants are educators from a variety of primary, intermediate, and secondary disciplines and from many regions of the province. For the past several years, this course has been opened to any Teacher interested in bringing agricultural awareness, understanding of the food system, and integration of food and agricultural literacy into their classrooms.

As a result of visits to local farms and through intensive classroom work participants developed a variety of units drawn from the agricultural, environmental, economic and nutritional concepts featured in the provincial IRP's to share with other educators around the province.

The BC Agriculture in the Classroom Foundation is supported by the BC Ministry of Agriculture, the BC Ministry of Health, private donors, as well as the agricultural community in our province. Participants were sponsored for their farm tours as well as their meals (prepared by our Summer Institute chef using fresh and delicious local products). Visit the BC Agriculture in the Classroom website at www.aitc.ca/bc for further information on this and our many other exciting programs or to order additional resources for your classroom.

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Ministry of Education Curriculum Draft (2014)

Subjects that can be covered:

Social Studies 8 - *Students will develop competencies needed to be active, informed citizens:*

- Use Social Studies inquiry processes (ask questions, gather, interpret and analyze ideas, and communicate findings and decisions)
- Recognize implicit and explicit ethical judgments in a variety of sources (ethical judgment)
- Make reasoned ethical judgments about controversial actions in the past and present after considering the context and standards of right and wrong (ethical judgment)

Social Studies 9 - *Students will develop competencies needed to be active, informed citizens:*

- Use Social Studies inquiry processes (ask questions, gather, interpret and analyze ideas, and communicate findings and decisions)
- Ask questions and corroborate inferences about the content, origins, purposes, and context of multiple sources (evidence)
- Determine and assess the long- and short-term causes and consequences and the intended and unintended consequences of an event, decision, or development (cause and consequence)
- Recognize implicit and explicit ethical judgments in a variety of sources (ethical judgment)
- Make reasoned ethical judgments about controversial actions in the past and present after considering the context and standards of right and wrong (ethical judgment)

Physical and Health Education 8 - *Students will develop the competencies needed to be healthy and active citizens.*

- Demonstrate an ability to apply a goal-setting or decision-making model to a specific situation
- Assess the content, origins, and purpose of information about safety and health topics
- Describe strategies for promoting wellness

Physical and Health Education 9 - *Students will develop the competencies needed to be healthy and active citizens.*

- Develop personal goals for attaining and maintaining sustainable lifelong practices that promote healthy and active living
- Assess the potential consequences of decisions and behaviours on both short and long-term personal goals
- Assess the accuracy and reliability of different sources of information about safety and health topics

Ministry of Education IRP's (2010)

Subjects that can be covered:

Foods and Nutrition 8

- C1 describe the importance of nutrition and other factors that contribute to health
- C3 use product labels to identify and compare the nutritional value of a variety of food products
- D1 describe factors that influence personal food choices

Foods and Nutrition 9

- C4 identify and compare the ingredients and nutritional value of various commercial food products
- D1 describe factors that influence food choices
- E1 identify food-related occupations and careers

Foods and Nutrition 10

- D1 describe a variety of food marketing techniques
- D2 identify factors that affect food production and supply, especially in Canada today
- D3 describe the cultural origins of menus, recipes, ingredients, and meal etiquette of a variety of ethnic, regional, and local cuisines, as represented in Canada
- E1 describe food-related occupations and careers

Foods and Nutrition 11/12

- Environmental and health issues related to the production of food
- Global, environmental, and health implications of food production and its consumption
- Implications of healthy and unhealthy eating
- A5 devise plans and implement effective strategies for task sequencing and time management in co-operation with partners and groups
- A3 demonstrate the ability to accurately evaluate and follow recipes using a wide variety of food preparation techniques and equipment
- B1 select recipes and apply cooking principles to prepare healthy dishes and multi-course meals, incorporating presentation and budgetary considerations
- A6 adapt ingredients and methods to create original recipes
- C5 critique the use of additives and enrichments, use of pesticides, and nutrition and health statements about food

Health and Career Education 8

- Set personal goals for attaining and maintaining a healthy lifestyle
- Analyse influences on eating habits, including family, peers, and media

Health and Career Education 9

- Relate the characteristics of a healthy lifestyle to their ability to maximize personal potential
- Analyse how healthy eating habits can support a healthy lifestyle

Planning 10

- C1 analyse factors that influence health (e.g., physical activity, nutrition, stress management)
- C2 analyse health information for validity and personal relevance
- C5 evaluate the potential effects of an individual's health-related decisions on self, family, and community

Social Studies 8

- Identify and clarify a problem, an issue, or an inquiry
- Gather and organize a body of information from primary and secondary print and non-print sources, including electronic sources
- Interpret and evaluate a variety of primary and secondary sources
- Assess a variety of positions on controversial issues
- Plan, revise, and deliver written and oral presentations
- Co-operatively plan and implement a course of action that addresses the problem, issue, or inquiry initially identified
- Compare the changing nature of labour in rural and urban environments
- Describe the impact of technological innovation and science on political, social, and economic structures

Social Studies 9

- Identify and clarify a problem, an issue, or an inquiry
- Select and summarize information from primary and secondary print and non-print sources, including electronic sources
- Assess the reliability, currency, and objectivity of different interpretations of primary and secondary sources
- Defend a position on a controversial issue after considering a variety of perspectives
- Plan, revise, and deliver formal oral and written presentations
- Co-operatively plan, implement, and assess a course of action that addresses the problem, issue, or inquiry initially identified

Social Studies 10

- Identify and clarify a problem, an issue, or an inquiry
- Plan and conduct library and community research using primary and secondary print and non-print sources, including electronic sources

- Generate and critique different interpretations of primary and secondary sources
- Assess and defend a variety of positions on controversial issues
- Plan, revise, and deliver formal presentations that integrate a variety of media
- Demonstrate leadership by planning, implementing, and assessing a variety of strategies to address the problem, issue, or inquiry initially identified Synopsis:

Unit Plan - Go! Go! Go Bananas! Food Choice Matters; Global versus Local Foods.

Originally created by Tammy Elliot (Summer 2014)

Updated and modified by Gurinder Cheema, B.A., B.Ed., M.Ed
Education Specialist, BCAITC (Fall 2014)

Terms covered: globalization, carbon footprint, local food, 100 mile diet, consumer, nutrition, fair trade

Rational for the Project:

Go! Go! Go Bananas!

An inquiry into how global food came to our table, the inherent repercussions, and how to make food choices that support our planet, economy and bodies.

Students need to be taught how to prepare and enjoy healthy, local food. Your students have to eat 3-5 times a day, but the implications of the choices they make are currently unrecognized. "The food system is not fixed. The selection, preparation, and consumption of foods, which are important determinants of the detailed working of the system, are strongly influenced by consumer decision-making" (Riley, 2005). A certain assumption can be made about how many people choose to eat – there is an astounding lack of awareness, especially amongst the youth. Not only is the food that most students eat packed full of ingredients they can't pronounce, it comes from all around the world, leaving a carbon footprint on the planet induced by the 1000s of miles travelled to get onto their plates. This unit is designed to raise awareness and help students make choices that are not only better for their health, but better for the planet and local economy as well. Students will explore big questions, some of which may have no right answer, but it is in the seeking that they will understand the complexity of the food story.

Go! Go! Go Bananas! is a unit that is partially inquiry and research combined with hands-on activities, helping students understand the implication of food choices, and encouraging them to prepare meals using ingredients that support BC agriculture. The joy of teaching an inquiry-based unit is that the students may take the topic in a multitude of directions. Some possibilities may include: engaging in Spuds in Tubs program, planting a classroom herb garden, taking a field trip to a local market or farm, and even building a school garden. What direction you take this unit depends on what subject and grade level you are focusing on.

Start the unit by exploring the banana industry, helping students explore the complexity of our food system. Bananas became a global food during the 1920s and have since become a staple in our North American diets. The big question needs to be asked: Do we really need bananas in our diets here in North America? They are packed with nutrition, but travel thousands of miles to become a staple in the average family's diet. By looking closely at the banana trade, students will move toward asking big questions:

- What are some of the current problems with our food system?
- How do we solve these problems?
- How can we make healthy, sustainable food choices?
- Why is it important to consider the 100 mile diet?

References:

Riley, M. (2005) Sustainable Futures: Food Choices Matters. *Journal of the HEIA*, Vol 12, No. 1.

Lesson 1: Big Banana Questions

Materials/Preparation:

- Computer and projector
- Poster Paper, Markers

Introduction/Objectives:

Discuss: Who here eats bananas? Today we are going to learn all about bananas – where and how they grow, who harvests them, how they get to our grocery stores and their nutritional benefits. Then we'll ask ourselves a big question: *Do we need to eat bananas?*

Pre-Video activity:

1. Work in groups of 3-5
2. Discuss and record on poster paper all that you know about bananas.
Consider some of these questions: Where are bananas grown? How are they grown? How are they harvested? What are nutritional values in eating bananas? Why do you eat bananas? Who is involved in getting bananas to your plate?
3. Share group responses with the class.

Video Activity: Show 3 videos found on You Tube:

1. This video is a **preview/trailer** to a documentary about the use of pesticides on banana plantations and the ill effects on the workers. Juan "Accidentes" Dominguez is on his biggest case ever. On behalf of twelve Nicaraguan banana workers he is tackling Dole Food in a ground-breaking legal battle for their use of a banned pesticide that was known by the company to cause sterility. Can he beat the giant, or will the corporation get away with it? In the suspenseful documentary BANANAS!*, filmmaker Fredrik Gertten sheds new light on the global politics of food.
<http://www.wgfilm.com/english/productions/productions/bananas/> (2mins, 36 secs)
2. This video shows how choosing organic, fair trade bananas is good for your health and your conscience.
<https://www.youtube.com/watch?v=ZECVqK6LQJQ> (1 min, 48 secs)
3. This video lists the top ten nutritional facts about bananas.
<https://www.youtube.com/watch?v=O5wRCbhbbuQ> (4min, 33s)

Application/Activity:

1. Students will watch all three videos and then be asked the big question: What can you add to your posters now? Would you still eat bananas? Why or why not? This should start a classroom discussion.
2. Terms to cover: globalization, fair trade (generate ideas, then define on the board)
3. Display the completed posters around the classroom.

Evaluation/Assessment: The teacher will look for participation and engagement. Review the posters, and mark the answers to questions raised.

Homework/Assignment:

1. Bring in a journal listing all of the foods you eat between right now and this class tomorrow.
2. Answer these questions in pairs. Hand in next class. (can make this a handout)
 - a. Why are bananas so popular?
 - b. How much would you pay for a banana?
 - c. Do we really need to import bananas?
 - d. What nutritional value does the banana offer that we can't get from locally grown foods?
 - e. What would happen to the workers if we all stopped eating bananas?
 - f. Talk to your parents tonight about what you learned about bananas. What are their thoughts on eating bananas?

Closure/Extension:

1. Look up other resources (news articles or videos) that highlight findings from the Nicaraguan banana workers versus Dole case. Ask students to find bias in the movie trailer versus these additional resources.
2. Letter writing: Write a letter to Dole about how you feel about their practices in Nicaragua
3. Journaling: Write a journal as one of the Nicaraguan banana workers who just found out that s/he is ill because of the pesticides sprayed on the fields.
4. Debating: The teacher may want to take some time here to talk about respectful sharing of opinions. Divide the class into 4 teams: organic banana farmers, pesticide banana farmers, a group of doctors, and unhealthy citizens. Each group has to write an opening statement explaining why bananas are good or bad. Then each group has to oppose one other team's opening statement. The debate could be planned today, and presented next class.
5. Bring in Fair Trade, Organic, and regular bananas. Each student conducts a taste test to see which tastes better. Raise points on which banana they would purchase and why. (add to posters)

Lesson 2: Agriculture in our Daily Lives

Materials/Preparation: Handout – Food for a Day. Research tool(s).

Introduction/Objectives:

Review what they learned last class about banana imports and ask them to share some of their responses for the homework questions.

Bring in a jar of salsa or other jarred food and explain to the students where all of the ingredients in the salsa came from. Explain what some of the unrecognizable ingredients are.

Application/Activity:

1. The purpose of this lesson is to help students understand where their food comes from. This is a research based assignment and we will be going to the library or computer lab, or bringing in mobile laptop/iPad carts if available.
2. Using the handout, students are to research 4 of the foods they ate in the last day. Food #1 will be bananas. (see handout for further instructions)
3. Give each student the handout. Explain each category. Begin research.

Evaluation/Assessment:

1. Check that students made their food lists.
2. Check for completion of research. (collect)

Closure/Extension:

Check out our website: aitc.ca/bc for a free download of a great salsa resource to connect to this lesson:

Corn and Black Bean Salsa Map

This resource asks the question: **How Far Did Your Corn and Bean Salsa Travel?** Use the recipe included to make an easy and delicious Salsa and then find out just how far those ingredients travelled to get to your classroom. Also available in class sets.

Food for a Day

Name: _____

Part 1 Instructions:

Pick 4 foods from the list you made of all of the food you ate in the last 24 hours. Find out where that food came from (there could be more than one location), what the nutritional value is of that food (some nutrients you should be looking for are: fats, sugars, carbohydrates, vitamins, minerals, protein, calcium, and fiber), and the distance that food travelled to get to your city (use a map of the world and the scale on the map, estimate how many kilometers that food has travelled).

You may find the following website helpful: <http://nutritiondata.self.com/>

Food Item	Where is this food from?	Nutritional Value	Kilometres travelled
1 - Bananas			

Part 2 Instructions:

According to what you learned through your research, answer these questions in complete sentences:

1. What food had the most nutritional value? Will you increase consumption of this food now?

Explain. _____

2. What food has travelled the most miles? _____

3. What are the negative impacts of food travelling long distances? _____

4. Will you decrease your consumption of foods that travelled long distances to your plate?

Explain. _____

5. Define the following terms:

(a) globalization: _____

(b) carbon footprint: _____

(c) consumer: _____

(d) nutrition: _____

6. When you buy food, what do you base your purchases on? (Circle top 2)

Nutrition Price Local food Environmentally friendly packaging

7. Would you ever want to work on a banana plantation? Explain why or why not.

Lesson 3: What does your Food Cost?

Materials/Preparation:

1. Computer and projector.
2. A variety of packed and unpackaged food to be given to each group.
3. Piece of paper per group.

Introduction/Objectives:

Today we are going to learn about the impacts of food imports.

Talk about the types of food accessible to you when you were growing up; share a personal story from your childhood or that of your parents/grandparents. Stories about eating from your background garden or foods from your culture etc. are also interesting for kids to hear.

If you don't have a personal story, feel free to share Tammy's: Being from Newfoundland, we killed and ate most of our own meat – moose, duck, goose, lobster, salmon, cod, etc. and we grew root vegetables and stored them in a root cellar over the cold winter. Fresh vegetables were limited. My dad talks about how special Christmas was because he got an orange in his stocking – the only orange he got all that year. How have things changed?

1. Show video *Where is Your Food From?* Stop at 2:12 before the video presents the solutions to the problem.

<https://www.youtube.com/watch?v=CTyAOXpJt2M>

Application/Activity:

1. Students will be given a food and then asked to list the 'costs' of food. Each group reports to the class. Talk about the cost of food? Does "cost" refer to just money?
2. Students will watch the video but won't be shown the solution. In groups of 3 – 4 students are asked to make a list of the problems and solutions inherent in import foods. (share responses)
3. Possible problems of import food include: local farmers are driven out of work, decrease in quality of food, environmental impact of transporting food, unpredictable food regulations in other countries: Is it safe to eat?
4. You can also share information about Food Systems: *includes all processes and infrastructure involved in feeding a population: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items. It also includes the inputs needed and outputs generated at each of these steps. A food system operates within and is influenced by social, political, economic and environmental contexts. It also requires human resources that provide labor, research and education.*
(http://en.wikipedia.org/wiki/Food_systems)

Evaluation/Assessment:

Teacher will walk around to each group and monitor and engage in group discussions.

Homework:

Your homework is to write down a question to ask our guest about local food. (Next class we will be having a guest speaker. Invite a speaker from: farmer's market, local farmer, buy local supporters, anyone from various industries in your area).

Closure/Extension:

Show them the remainder of the video. Hopefully it will just confirm what they came up with in the group discussion. (they can add new answers to their responses now)

Lesson 4: Guest Speaker

Note: *The teacher needs to make arrangements for a speaker to come in and discuss positive aspects of buy local movements.*

Introduction/Objectives:

By the end of this class, students should be able to understand that supporting local farmers is good for their health, the environment and local economy.

Quick review of concepts thus far, to bring guest speaker up to speed. Introduce guest speaker.

Terms to cover (by teacher or guest): Local food, 100 mile diet

Application/Activity:

After listening to the guest speaker, has your perspective changed on local food?

Assignment/Assessment:

Hand out assignment. This assignment is due in ____ days.

Date: _____

Eating Local Assignment

Name: _____

This assignment will demonstrate your understanding of a local agriculture company within 100 miles of your city. Findings will be shared with the class.

Assignment options:

- You can work on this alone or with a partner.
- You can do either a poster, a newspaper article, PowerPoint, or Prezi

Required Elements:

- Assignment must include the name of the company or organization, and location
- Assignment must include a brief history of the company or organization
- Assignment must describe the type of agricultural activity company participates in
- Assignment must explore the challenges and benefits of running this company
- Discuss/detail the benefits of buying food from this company for your health, your community, and one other element.
- Due date: _____

How you will be graded:

	4	3	2	1
Use of class time	- Used time well during each class period. - Focused on getting the project done. - Never distracted others.	- Used time well during each class period. - Usually focused on getting the project done and never distracted others.	- Used some of the time well during each class period. - There was some focus on getting the project done but occasionally distracted others.	- Did not use class time to focus on the project OR often distracted others.
Content - Accuracy	- At least 7 accurate facts are used in the assignment.	- Used 5-6 accurate facts in the assignment.	- Used 3-4 accurate facts in the assignment.	- Less than 3 accurate facts are used in the assignment.
Required Elements	- The work includes all required elements as well as additional information.	- All required elements are included in the assignment.	- All but 1 of the required elements are included in the assignment.	- Several required elements were missing.
Spelling, Grammar, & Punctuation.	- There are no mistakes in the assignment.	- There is 1 mistake in the assignment.	- There are 2 mistakes in the assignment.	- There are more than 2 mistakes in the assignment.

Self-assessment: Circle the areas that you feel represents your work on the above chart.

Teacher Assessment and Comments:

Lesson 5: Supporting Local Agriculture and Economy

Materials/Preparation:

- Map of you City, enough to give one to each class member.
- Star or dot stickers.
- Pencils and pencil crayons.
- My Food handout (this can be used as a pre-unit activity as well)

Introduction/Objectives: To learn about local companies and organizations that either grow or promote local food.

Thank class for exploring local food. Now we will find out more about what your classmates discovered.

Application/Activity: Everyone has 5-7 minutes to share what they have learned about their respective company.

1. While watching presentations, using the map and your stickers, locate and label the company or organization being presented. Please note that this will be the cover to your Local Eating Recipe Book (next project if you choose to continue this unit). Feel free to decorate or color your map. Students must locate at least 10 companies or organizations presented by their classmates.
2. In pairs and using the handout, students will prioritize what is most important to them about food. Did your view change since we started this unit?

Evaluation/Assessment:

Poster has a minimum of 10 locations and has the students' name on it. Teacher will circulate with the group and evaluate the work.

Closure/Extension: You may end this unit now or continue on with lessons that use local ingredients to make snacks and meals to share. (see below for some examples)

Eating Local

This Recipe Book Belongs to: _____

Insert your city map here:

Grade:_____ Block:_____

Name:_____

My Food

Instructions: There are 10 food descriptors below. Place a #1 beside the one most important to you, #2 beside the one of secondary importance, etc. etc. When you are done, #10 should be of the least importance.

My Food:

- ___ has no or little packaging
- ___ has ingredients I can pronounce
- ___ was grown by a local farmer
- ___ is fresh
- ___ is tasty
- ___ has travelled less than 100 miles
- ___ is low in fat
- ___ is low in sugar
- ___ is organic
- ___ provides my body with energy and nutrition

The last few days we have been learning about the food we eat. List three big ideas (not details) that you now know that you didn't know before.

1. _____

2. _____

3. _____

Lesson 6 Unit Extension Ideas: Supporting Local Agriculture and Economy by Eating Local Foods

Extra Lesson Ideas:

- Make some meals using local ingredients
- It is important for students to understand that the food system is complex and that it is very difficult to eat 100% within the 100 mile diet
- For example, salt, sugar, and many oils are foods not found within 100 Miles
- Although these three ingredients are not necessarily good for our health, they add flavor to our food.

Some recipe ideas that may promote local ingredients include:

- Potato pancakes
- Borscht
- Corn Chowder
- Caramelized Onion and Kale Pesto
- Broccoli and Cheese Omelets
- Turkey Meatloaf with Cranberry Glaze
- Twice Baked Potatoes Stuffed with Chicken, Broccoli and Cheese
- Roasted Beet Salad with Kale and Feat Cheese
- Fresh Salsa
- Strawberries and Whipped Cream
- Peach Cobbler
- Blueberry Cake
- Cherry tomato and local cheese kabobs
- Chicken and bell pepper stir fry