

Where in the World does your food come from?



A Series of Lessons on the Global Food System and Local Alternatives for the Elementary School Level

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The Global Food System is...

International, complex, unsustainable

A **web of workers**: farm workers, warehousers, truck drivers, processors, advertisers, retailers...

Cities of **the developing world** importing over 50% of their food from other countries

Access to **tropical foods** in northern countries

Losing 75% of the genetic diversity of our food crops since 1900

Food travelling an average of

2000km from field to plate

Importing 90% of the food we eat on Vancouver Island

LOSS of food vitality and taste

Industry, technology and **corporate** finance

12 major corporations **controlling production**of over 90% of supermarket items

Monocropping, Monopolies and Oligopolies

A \$3 billion trade deficit in food items in B.C.

Local Agriculture is...

Accessible, **fresh**, healthy

Urban Agriculture, C.S.A's, Farmers' Markets, Rooftop Gardens

55 Farmers Markets in B.C., **100 Community Gardens** in Montreal,
8000 city farmers in Havana

International **Solidarity** and **Environmental Stewardship**

Relationships between farmers and consumers

Producing 14% of the worlds' food in urban areas

Green and beautiful cities

Opportunities for youth

community building and economic development

Preservation of **Biodiversity**, land and fossil fuels

Goals of these Lessons

- **1** Gain an understanding of where food comes from. Compare the global food system with Cuba's local food system.
- **2** Assess the environmental, economic and social implications of global and local food systems.
- **3** Examine local and international sustainable alternatives to the global food system.
- **4** Learn about Canada's efforts to support international food security initiatives.
- **5** Share learning and build cross-cultural alliances with students in Cuba.



Important Concepts in these Lessons

Food Systems:

The group of interrelated elements involved in growing, transporting, processing, marketing and consuming food.

Food Security:

The idea that all people, at all times, should have access to nutritious, safe, personally-acceptable and culturally-appropriate foods, produced in ways that are environmentally sound and socially just.

Sustainable:

Use of something, such as a resource, in a way that its viability, health and vitality is maintained for future generations of people, animals and other beings.

Globalization:

The movement in our world towards an interconnected business environment, in which goods move freely between countries, regardless of social, economic or environmental cost.

Urban Agriculture:

Growing food within the city.

Organic Agriculture:

Food production that avoids the use of chemical fertilizers, chemical pesticides, chemical growth regulators/hormones and antibiotics. Organic methods minimize the impact on the environment, focusing on maintaining a healthy soil and a balanced farm ecosystem that is environmentally sustainable.

International Solidarity:

Supporting people and projects in countries outside of Canada in the spirit of justice and the common good.



An Introduction for the Teacher

Why Worry About Food?

As you open this book, you may be asking yourself why worry about food? What is the purpose of an entire resource kit dedicated to the issues of food? And why should my students care? In Canada, many of us take food for granted; it is not an "issue" many people think about. Our supermarkets appear to be full of food and prices are largely affordable. Canadians spend only 14.2% of their income on food, the 2nd lowest in the world.

Yet, food insecurity remains a reality for many people. Over a million Canadians, half of whom are children, go hungry every day.² Few communities have more than 3-4 days worth of food stockpiled for emergency situations,³ and much of the food available in supermarkets is unnatural and unhealthy. People have lost their knowledge of nutrition and the ability to grow their own food. We are incredible dependent on a system that we have little control over. The average piece of food travels 2000km to reach us⁴, spending days, even weeks, between harvest and consumption, losing taste and nutritional value along the way.

There are ecological and economic problems with this kind of food system. It relies on a network of production, processing and distribution that for the most part is energy intensive and environmentally harmful. Ownership of the inputs for production, means of production, processing, transportation, wholesale and retail of food is concentrated in the hands of a few large-scale agribusinesses. In fact, only six companies control 70% of global agricultural trade. This concentration leaves little room for social accountability in decision-making. Workers in developing countries are exploited with low wages and unhealthy working conditions, while growing food for our markets. Small Canadian farmers are squeezed out of business by high operating costs and unfair competition from big businesses.

In Canada, farmers, consumers, community developers, environmentalists and social justice workers have come together to re-evaluate the process of food production and distribution. Taking inspiration from places such as Cuba, where the food system has been turned around from being almost entirely dependent on imports to being almost entirely self-sufficient, these people have facilitated the re-emergence of local food systems in Canada. Their work has resulted in a flourishing of community ventures such as farmers' markets, urban gardens and Community Shared Agriculture across the country. Collectively, these projects mark the re-emergence of local food systems and symbolize powerful examples of alternatives to the global food system.



In this resource kit, you will find a number of activities and resources to assist you in guiding students through the web of the global food system. You will take them on a journey from the realities of a global import-based food system to the positive alternatives found at a local level. Students will explore where their food comes from, "travel" to Cuba to learn about the revolution in food production there, and use their insight to envision a sustainable food system in their own hometown.

Your students may never see food the same way again!



LifeCycles Project Society

"We envision a world that recognizes our relationship with food as key to maintaining a healthy planet."

LifeCycles is a non-profit organization dedicated to cultivating awareness and initiating action around food, health, and urban sustainability in the Greater Victoria community. We work proactively to promote and create personal, shared and community gardens, research, and educational activities and youth skills development programs. Through partnerships we strengthen individual, community and global health.

l Jacinda Fairholm, Urban Agriculture and Food Security in Canada: A Survey of Non-Governmental Organizations (Victoria: Lifecycles Project, 1998), 9.

² lbid, 9.

³Island Farmers' Alliance. Victoria, BC. 2002.

⁴ Toronto Food Policy Council, Health Wealth and the environment: the impacts of the CUSTA, GATT and NAFTA on Canadian Food Security. (Toronto: Toronto Food Policy Council, 1994), 15.

⁵ Oxfam, 'The Business of Food,' Oxfam Home Page, 2002, www.oxfam.ca/campaigns/worldFoodDay.htm (21 March 2002).

What's in this Kit

This kit contains all the information, activities and resources you will need to teach your class about the issues of food security and urban agriculture in Canada and abroad. It is divided into 5 lesson areas, each of which has a backgrounder and activity plans as follows.

Backgrounders contain detailed information to brief you on the issues addressed in the lesson.

Backgrounder #1: What is Food Security?

Backgrounder #2: Where in the World is Our Food Coming From?
Backgrounder #3: The Implications of a Global Food System
Backgrounder #4: Cuba: the New "Green Revolution"

Backgrounder #5: Taking Action: Local and Global Initiatives for Change

Activity Plans contain detailed instructions, time lines, material lists and accompanying resources to share with your class

Lessson#I: A Tomato's Story

Lesson #2: Food Mapping: Where in the World is Your Food Coming From?

Lesson #3: Visualizing Change in the Global Food System

Lesson #4: A Letter from Esmeralda

Exploring the World of Urban Agriculture

Lesson #5: Cultivating Possibility: Picturing Urban Agriculture At Home

Bringing Our Groceries Home

Sharing Our Stories: A Letter Exchange with Cuba

Following the activity plans in each lesson, are supplementary activities that you can use to expand opportunities for classroom learning and at-home reflection. This kit is concluded with a glossary of important terms, lists of both print and webbased resources and teacher and student evaluations for the curriculum.



How to Use this Kit

The key lessons in this kit can be facilitated consecutively in the form of a one and a half hour class. Alternatively, most lessons can be completed independently, or as a part of a full unit on food security and urban agriculture.

How to Run a Class...

- l. Chose the activities you wish to use with your class.
- 2. Invite four-five parents or volunteers to act as classroom assistants, if desired.
- 3. Divide the class into groups of four or five.
- 4. Introduce the theme of the class (Where food comes from).
- 5. Facilitate activities.
- 6. Evaluate class with students and facilitators.
- 7. Wrap up and review themes of the class:
 - a. Our food travels great distances to reach us.
 - b. There are serious problems with the global food system.
 - c. Sustainable alternatives are possible at the local level.

A class of one and a half hours, would include the following key activities:

| Activity | Time |
|---|--------|
| Activity #1: The Tomato's Story | 5 min |
| Activity #2: Food Mapping: Where in the World? | 10 min |
| Activity #3: Visualizing Change in the Global Food System | 20 min |
| Activity #4: A Letter from Esmeralda | 10 min |
| Activity #5: Exploring the World of Urban Agriculture | 5 mín |
| Activity #6: Picturing Urban Agriculture At Home | 15 min |
| Activity #7: Bringing Our Groceries Home | 5 min |
| Activity #8: Sharing Our Stories: A Letter Exchange with Cuba | 20 min |

What You Will Need to Run a Workshop:

Each activity in this kit has an accompanying **materials supply list**. In addition to these materials, you will need:

- I. One lead facilitator (usually you, the teacher).
- 2. Additional assistant facilitators (one for each four-five students in your class).
- 3. Name tags for the facilitators and students in your class (if they don't know each other).
- 4. Reflection and evaluation sheets for students and facilitators (Appendix E).



Curriculum Connections

Where in the World? meets the needs of BC teachers and students by satisfying the Ministry of Education Learning Outcomes in a variety of curricular areas for Grades 2 to 7.

Here is a partial list of the Learning Outcomes that are matched by activities in Where in the World?

| Social Studies | Activity |
|---|-----------------------------|
| Identify an issue and provide several reasons to support a position | 3, \$2 |
| Draw simple interpretations from personal experiences, oral sources, and visual and written representations | 8, SI, S2, S6, S8 |
| Describe ways in which communities are interdependent | 3, SI, S2 |
| Analyze the relationship between development of communities and their available natural resources | 3, 4, 6, 7, SI, S2 |
| Assess the affects of lifestyle and industries on local and global environments | l, 2, 3, Sl, S2, S6 |
| Assess affects of urbanization and technology on lifestyles and the environment | I, 2, 3, SI, S2, S6 |
| Compare use of resource and conservation practices in Canada and other countries | 2, 4, 5, SI, S4 |
| Interpret simple maps | 2 |
| Locate world continents | 2 |
| Demonstrate an understanding of sustainability (and) stewardship | 3, 6, 8, SI, S2, S6, S7 |
| Demonstrate understanding of their responsibility to the local and global environments | 3, 6, 8, SI, S2, S4, S5, S6 |
| Designdetailed courses of action to address | 6, 3, S6, S7, S8 |

national/global problems or issues



| Personal Planning | Ativity |
|--|----------------------------------|
| Analyse and evaluate personal attitudes that promote healthy eating habits and a healthy lifestyle | 2, 3, 6 |
| Select and apply behaviours that promote healthy eating habits and a healthy lifestyle. Use information and resources to support aspects of healthy living | 6, S3, S6, S8 |
| ldentify ways to respond to and solve problems | 3, 4, 6, \$2, \$5, \$6, \$7, \$8 |
| Point out the possible impacts of their decisions on themselves, others, and on the environment | 2, 3, 6, \$2, \$5, \$6 |
| Demonstrate an awareness of factors that affect global health issues | 3, 4, \$2, \$4, \$5, \$6 |
| Life Science 2 to 7 | Activity |
| Demonstrate knowledge of what animals need to survive. | 3, \$2, \$5, \$6, \$7 |
| Discuss how changes in an organism's habitat can affect the survival of individual organisms and species | 3, S2, S6 |
| Suggest reasons for endangerment or extinction of an animal species | 3, S2 |
| Identify living resources in the local environment | 3, SI, S2, S6, S7, S8 |
| Describe the known and potential environmental impacts of using BC's living resources | 3, 6, 7, \$2, \$5, \$6 |
| Describe how humans use BC's living resources | 3, 6, 7, SI, S2, S5, S6, S7 |
| Devise a strategy for sustaining a living resource | 3, S8 |
| Asses the impact of chemical pollution on the local environment | I, 3, S2, S5, S6 |



| Language Arts | Activity |
|---|--------------------------------|
| Listen actively. Respond verbally and non-verbally | All |
| Demonstrate a willingness to participate in a variety of shared activities | 2, 3, 6, 8, SI, S2, S5, S6, S7 |
| ldentify what they know about topics selected by a group of students | 3, 6, S5 |
| Contribute relevant ideas to discussion | 3, 6, SI, S6 |
| Demonstrate interest in using information from documentaries | 8, S4, S7, S8 |
| Describe and recount key ideas or information from various media | 3, 6, 8, SI, S2, S6 |
| Interpret their impressions of simple and direct storiesand electronic media | 3, 6, 8, SI, S4 |
| Identify details and feelings conveyed by illustrations | 6, SI, S8 |
| Create a variety of written communications to express their feelings and concerns | 8, S2, S6 |



Backgrounder #1

What is Food Security?

Food is one of the most basic necessities for life. It provides us with the energy and nutrition needed for daily living. It evokes a primary connection between the earth and human health. It has cultural, environmental, economic and social implications. Food is very important. Yet, the way food systems are managed in Canada, and around the world, does not reflect this.

In Canada, we are fundamentally disconnected from our food. Some people may shake their heads at this statement and say, "I eat three healthy meals a day...I enjoy my food!" But the question of food is not that simple. In the past 50 years our food systems in Canada have become increasingly complex. This complexity seriously jeopardized our food security.

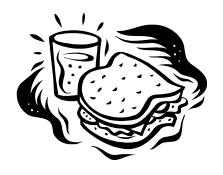
Food Security: Assurance that all people, at all times, have access to nutritious, safe, personally-acceptable and culturally-appropriate foods, produced in ways that are environmentally sounds and socially just.

There are many components to food security that affect how we interact with our food and the impact our food systems have on the world. These components include:

- 1. Reasonable cost of food
- 2. Ready access to food
- 3. Sufficient personal income to purchase food
- 4. Freedom to choose personally acceptable foods
- 5. Confidence in food quality
- 6. Food produced in a just and sustainable fashion
- 7. Food pricing that accounts for the social and environmental costs of production
- 8. Accurate information about food and nutrition

All of these components of food security are in someway undermined in Canada. Our food system is increasingly unsustainable. The price of food does not account for environmental and social costs of a global food system (fuels for transportation, loss of species diversity, exploited workers, lost jobs, struggling communities...). Yet the cost of healthy, quality food is still out of reach for a number of Canadians. Ready access and choice are major illusions. Confidence in food quality is decreasing. Incidences of mad cow disease, genetic engineering and pesticide poisoning give us good reason to worry.

The majority of problems with food are rooted in the fact that our food system is not local, but global. Food is produced far from the location of consumption, on farms that are becoming increasingly large and industrialized. The average piece of food travels up to 2000km from field to table. No wonder we are disconnected! The complexity of the global food system has taken us far from our *roots".



Activity #1

All Grades

A Tamato's Story

Description

In this activity, you will enact a short skit of a tomato's journey through the global food system for your class.

Objective

To energize and excite the students, while introducing the idea that our food travels great distances from field to table.

To explore the problems associated with importing food from far away.

Time

5-10 minutes

Materials

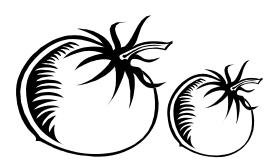
Tomato Costume

Let's&!

* Two scripts are provided for this skit. They contain the same information, though the language of the second script is adapted for older students.

The Scene

A big red tomato stumbles into the classroom, looking quite dazed. Panting, the tomato grasps the wall for support and sighs. In the weariest tomato voice, s/he begins...



The Script (Grades 2-5)

TOMATO: Whoa! Am I ever tired! (Panting) I've just traveled ALL THE WAY from California to visit with you today. What a LONG journey! I had no idea it would take me this long to get here. Phew...

(Tomato stops, pants, then straightens up and faces the class).

"Let me tell you my story... It all started one Thursday morning when I was taken from my cozy home on the vine. What a horrible day! I wasn't ready to be picked. It was WAY too early; I was still green! It was like being woken up at 5am in the morning. Do you know how terrible that is? The man who picked me apologized, but said he had no choice. He was just an underpaid farm worker following his boss's orders. The next thing he had to do was to toss me in a bin and spray me with chemicals. Eek!" (Tomato raises his/her arms to "block" the chemical spray).

"That wasn't nice for either of us. He said the chemical was supposed to keep me fresh for the journey to Canada, but I say Yuck! I just felt sticky and polluted. And that bin! It was crammed full of other grumpy tomatoes. I got an elbow in my rib and now I think I'm bruised." (Pokes his/her side and says "Oh!").

"Well, once we were crammed in that bin, they put us on a truck and we jiggggggled all the way to a processing plant (jiggle up and down). I got a bit dizzy from the ride. At the plant they dumped us out on a table and pushed us around. Some of my friends were taken away for being just a little small. But not me! I got a sticker slapped on my face (slaps a sticker on her/his face) and was crammed into another box."

"They put us on a second truck, a really big truck this time. And we were off on our way to Canada. Do you know how long it takes to drive from California to Canada? It took SO long. I even got carsick (holds stomach) and now I'm all deflated. Oh, I'm SO tired."

"The worst part is that I made it all the way here to find out you already have tomatoes. You can grow them right outside your door! I've seen them! So I don't know why I'm here. I'm just going to go rest in the corner. I'm pooped."

(A deflated Tomato slumps off to a corner to rest.)

The Script (Grades 6-7)

TOMATO: "Hey (name of lead facilitator), did I just hear you talking to these students about where food comes from? Whoa! Let-me-tell-you...I've just traveled ALL the way from California. What a LONG journey! I had no idea it would take me this long. Phew..."

(Tomato stops, pants, then straightens up and faces the class).

"Let me tell you my story... It all started one Thursday morning when I was rudely awoken by a rough hand yanking on my vine. What a lousy way to wake up! It was WAY too early. I wasn't ready to be picked! I was still green. Oh man, I was not happy! The person picking me must have sensed my unhappiness because he leaned over and apologized as he tore me from my bed. He said that it wasn't his choice to pick me. He was just an underpaid worker following the orders of the farm boss. It's not like his life was a bed of roses! The next thing he was ordered to do was to toss me in a bin and spray me with chemicals. (Tomato raises his arms to "block" the chemical spray). Yuck! That's not the kind of shower I was hoping for on a Thursday morning!"

"I was told the chemicals would keep me fresh for the ride to Canada. Whatever! It only made me feel toxic and sticky. And that bin! That bin was crammed full of other grumpy tomatoes. I got an elbow in my rib and now I'm bruised all over." (Pokes his/her side and says "Oh!")

"Well, once we were crammed in that bin, they put us on a truck and we thumped all the say to a processing plant (throws him/herself around a little). At the plant they dumped us out on a table and pushed us around. Some of my friends were taken away for being just a little small. The nerve! But not me; I got a sticker slapped on my face (slaps a sticker on his/her face) and was shoved into another box."

"They put us on a second truck, one of those big-rig trucks; and we were off on our way here. Do you know how long it takes to drive from California to Canada? WAY too long! The trip was exhausting. And boring! Just highway, highway and more highway. Nothing but concrete and car fumes!"

"The worst part is that I made it all the way here to find out you already have tomatoes. You can grow them right outside your door! So I don't even know why I'm here. It just doesn't make sense! I'm going to rest over here in the corner and see if you can figure it out." (A deflated Tomato slumps off to a corner to rest.)



Backgrounder #2

Where in the World is Our Food Coming From?

The food we eat on Vancouver Island comes from all over the world. Only 10% of food consumed on Vancouver Island is grown here, with the remaining 90% being imported from off-island. While 40% of this food comes from within British Columbia, 50% comes from other Canadian provinces, the United States and countries beyond North America. This means that for BC as a whole, 50% of our food is imported from outside of the province. 55% of this imported food comes from other Canadian provinces, the majority from Alberta and Ontario.² The remaining 45% of our imported food comes from foreign sources, 61% of which is from the U.S.³

In 1999, we imported \$6.37 billion worth of fish and agricultural products into B.C. and exported \$3.4 billion worth of fish and agricultural products. One may question why we are exporting so much food when we have to import food in turn. This is one of the nonsensical features of trade. Some people would say that trade is based on comparative advantage, where a region or country focuses on producing food that it can grow cheaply and effectively, according to climate, ecosystem, and labour and environmental standards. This food is then traded internationally for other food or products that have been produced in the same "comparative advantage" spirit.

This theory of trade falters when we look at some statistics though. In 1999, we imported \$129, 237, 000 worth of fish from Asia and exported \$427, 508, 872 worth of fish to Asia. In the same year, we imported \$6, 548, 749 worth of eggs from the US and exported \$1, 383, 267 worth of eggs to the U.S.⁵ One has to ask why we don't sell locally the food we produce domestically; and why we don't increase this domestic production instead of importing food from elsewhere. Certainly, importing food allows us to experience a variety of food that can't be produced in British Columbia. But a great diversity of food can be produced here, and the movement of food around the globe has serious implications that aren't always accounted for in *comparative advantage." We will look at the issues with greater depth in lesson #3.

On average, the food we eat travels 2000km from field to table



I Island Farmers' Alliance. Victoria, BC. 2002.

2 Statistics Canada, 1999 Interprovincial and International Trade Flows. (Ottawa: Statistics Canada, March 2002). 3 B.C. Ministry of Agriculture, Food and Fish International Trade Statistics, 1996-1999. (Victoria: BC Ministry of Agriculture, Food and Fisheries, 1999), 17, 47.

4 lbid.

5 ibid.

Sources of our imported food(1999):

| Internationally: | | |
|---|---|---|
| \$2, 855, 912, 409 \$1, 745, 255, 228 \$146, 815, 143 \$130, 425, 584 \$106, 073, 073 \$67, 674, 382 \$57, 422, 174 \$43, 705, 555 \$36, 512, 847 \$35, 008, 803 | Total United States Thailand Australia China Mexico New Zealand Chile Italy Ecuador | 61% 5.0% 4.6% 3.7% 2.4% 2.0% 1.5% 1.3% |
| \$34, 059, 821 | France | 1.2% |

Inter-Provincially:

| \$700, 000 Yukon \$878, 100, 000 Undetermined |
|--|
|--|

^{*}Source: BC Ministry of Food, Agriculture and Fisheries

Food Produced in British Columbia:

The climate on Vancouver Island is conducive to year-round cultivation of a variety of produce including:

Vegetables

Asparagus, Beans, Beets, Broccoli, Brussels sprouts, Cabbage, Carrots, Cauliflower, Celery, Chinese vegetables (Bok choy, Gai lan, Lo bok, Snow peas, Sui choy), Cilantro, Corn, Cucumber, Eggplant, Fennel, Green onions. Leeks, Lettuce, Mushrooms, Onions, Parsley, Parsnips, Peas, Peppers, Potatoes, Rutabagas, Spinach, Sprouts (Alfalfa, Bean, Radish), Squash (Summer, Winter, Pumpkin), Tomatoes, Watercress



Apples, Apricots, Berries, Cherries, Cantaloupes & other muskmelons, Grapes, Kiwis, Nectarines, Peaches, Pears, Plums, Prunes, Rhubarb, Watermelons

Meats

Clams, Crabs, Oysters, Prawns, Shrimp, Cod, Halibut, Ling cod, Perch, Rockfish, Salmon, Snapper, Sole, Trout, Chicken, Duck, Goose, Turkey, Beef, Lamb, Pork, Rabbit, Veal, Bison, Deer, Reindeer

Dairy Products

Eggs, Milk, Acidophilus milk, Buttermilk Yogurt, Cheese (Cheddar, Colby, Edam, Feta, Farmer's, Goat milk cheese, Gouda, Monterey jack, Mozzarella, Parmesan, Sheep milk cheese, Unripened cheeses

Nuts and Beans

Filberts / Hazelnut, Lentils, Split peas

I B.C. Agriculture in the Classroom Foundation, *Grow B.C.: A Teacher's Handbook on BC's Agriculture, Fish and Food Business.* (Abbotsford, BC: BC Agriculture in the Classroom Foundation, 1998), 182-184.









Activity #2

All Grades





Where in the World is Your Food Caming Fram?

Description

In this activity, your class will examine the labels on a selection of grocery items from two islands of similar size, Vancouver Island and Cuba, for information on the foods' origin. They will map out their findings on a large world map.

Objective

To explore where our food comes from and map out the distance it travels to reach us.

To compare the distance our food travels with the distance food Cuban families eat travels.

To gain a sense that food can be grown close to home, rather than imported from a great distance.

Time

10-20 minutes

Materials

Classroom assistants to work with each student group

Large world map

8xII photocopies of a world map - one for each group (See following page)
Food cut outs (See following pages)

A bag of typical groceries for a family on Vancouver Island, clearly labelled with their place of origin (See following page)

A bag of typical groceries for a family in Cuba, all labeled as coming from Cuba (See following page)

Let's&b!

- l. Divide your class into groups of four-five; allocate an assistant to work with each group.
- 2. Ensure the world map, grocery bags, and food cut outs are ready.
- 3. Introduce the activity.
- 4. Invite one student at a time to come to the front of the class and choose an item from the Vancouver Island Grocery Bag. Have them read out the label, stating where the item comes from.
- 5. Ask for a second volunteer to indicate, on the map, the province or country the food comes from sticking a paper cutout on the map for visual reference.
- 6. Repeat, until all items in the bag have been addressed.
- 7. Meanwhile, have individual facilitators work in their groups with the smaller

maps, locating where the food comes from. This will keep students focused while they wait for their turn to come to the front.

- 8. Address the points mentioned below once all the food is on the map.
- 9. Once the Vancouver Island Grocery Bag is empty, introduce the Cuban Grocery Bag.
- 10. Repeat the same sequence of having students come to the front as you did with the first Grocery Bag.
- II. Once all items are finished, address the points mentioned below, emphasizing the difference in distance food travels from field to table on Vancouver Island and in Cuba.

Points to Address with your class

With Vancouver Island Food:

- Most of the food we eat on Vancouver Island, and in BC in general, comes from far away.
- On average, the food we eat travels 2000km before it reaches our plate.
- In the opening skit, we learned about some of the problems that come about when food travels such a distance, especially when it can be grown right here on Vancouver Island and in BC.

With Cuban Food:

- Some cities and countries have chosen to grow the majority of their own food, instead of importing it like Vancouver Island does.
- Canada has supported other countries to develop food systems in which the
 food is grown locally. Canada has supplied money, ideas and professionals
 to create food systems that are more beneficial and sustainable. One of the
 countries Canada has supported is Cuba.
- Cuba is an island country about the same size as Vancouver Island. Cuba is unlike Vancouver Island in that they are almost entirely self-sufficient in food.
- In Cuba the majority of food is grown locally; Cubans know a lot about the benefits of growing food locally.
- We will go on to learn more about Cuba's food production system in Activity
 #4.







FoodList.

Before you begin this activity, pick up the following items at the grocery store. Ensure they are clearly labeled with their place of origin, or label them yourself, using the following chart. Organize the items into two grocery bags, one for Vancouver Island and one for Cuba. Label the bags clearly.

Your students will enjoy selecting items from the grocery bags and examining them to see what their labels have to say.

| Chicken Steak Alberta Milk Vancouver Island Eggs Vancouver, BC Onions Ontario Potatoes Tomatoes Carrots Kiwi fruit Apples Surrey, BC Onlors Vancouver, BC Ontario California California New Zealand Oliver, BC | Vancouver Island Groceries | Place of Origin |
|--|--|--|
| Grapes Chile | Steak Milk Eggs Bread Onions Potatoes Tomatoes Carrots Kiwi fruit Apples | Surrey, BC Alberta Vancouver Island Vancouver, BC Ontario PEI California California New Zealand Oliver, BC |

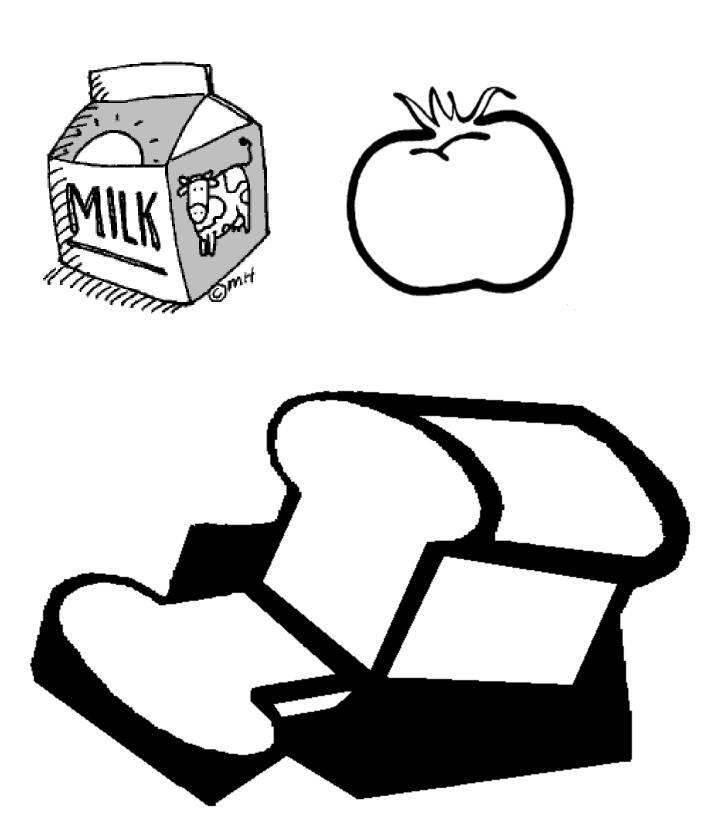
| Cuban Groceries | Place of Origin |
|--|--|
| Pork Chicken Milk Bread Spinach Beans Corn | Cuba Cuba Cuba Cuba Cuba Cuba |
| Tomatoes Garlic Onion Bananas Grapes | Cuba Cuba Cuba Cuba Cuba Cuba |

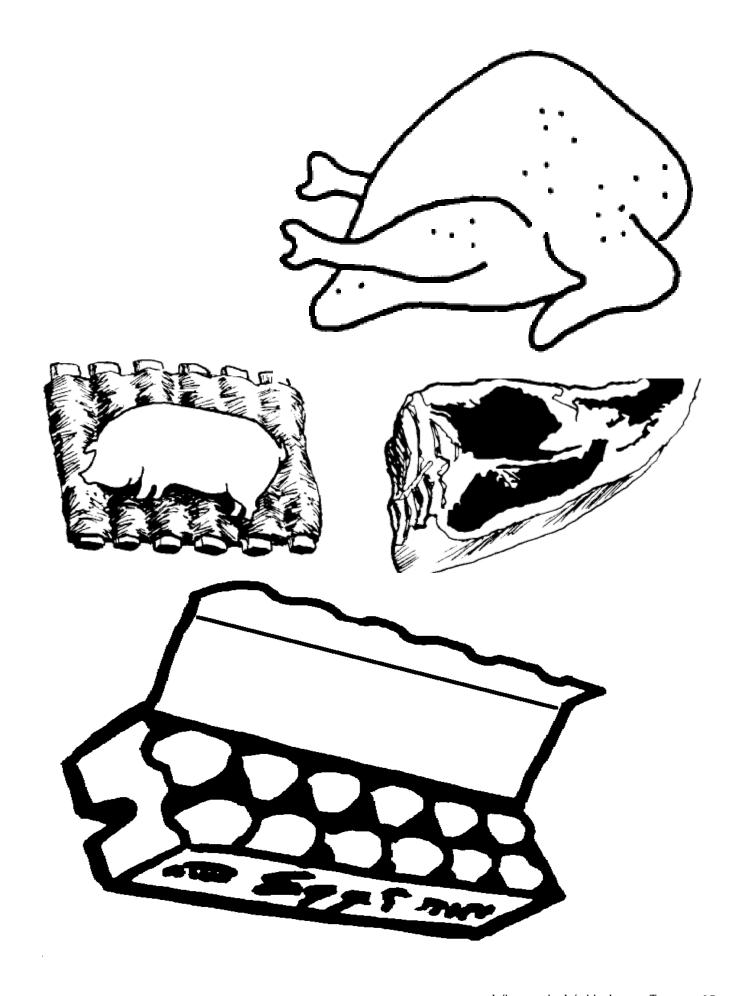
Grocery Cut Outs

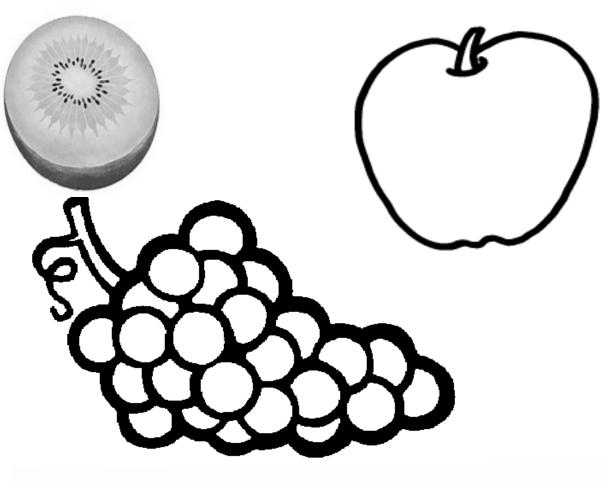
These food sketches can be photocopied, cut out and laminated for use in the mapping exercise.

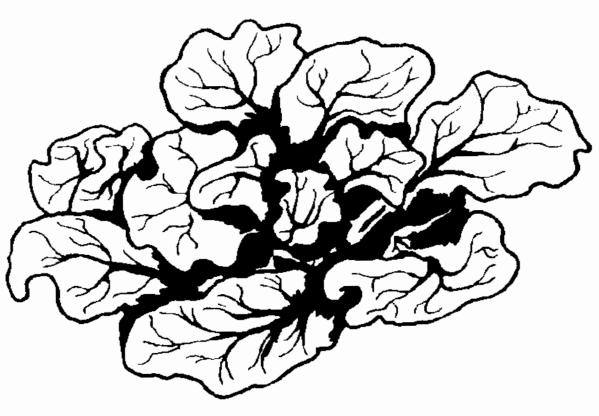
Use sticky tack or tape to attach them to the world map.

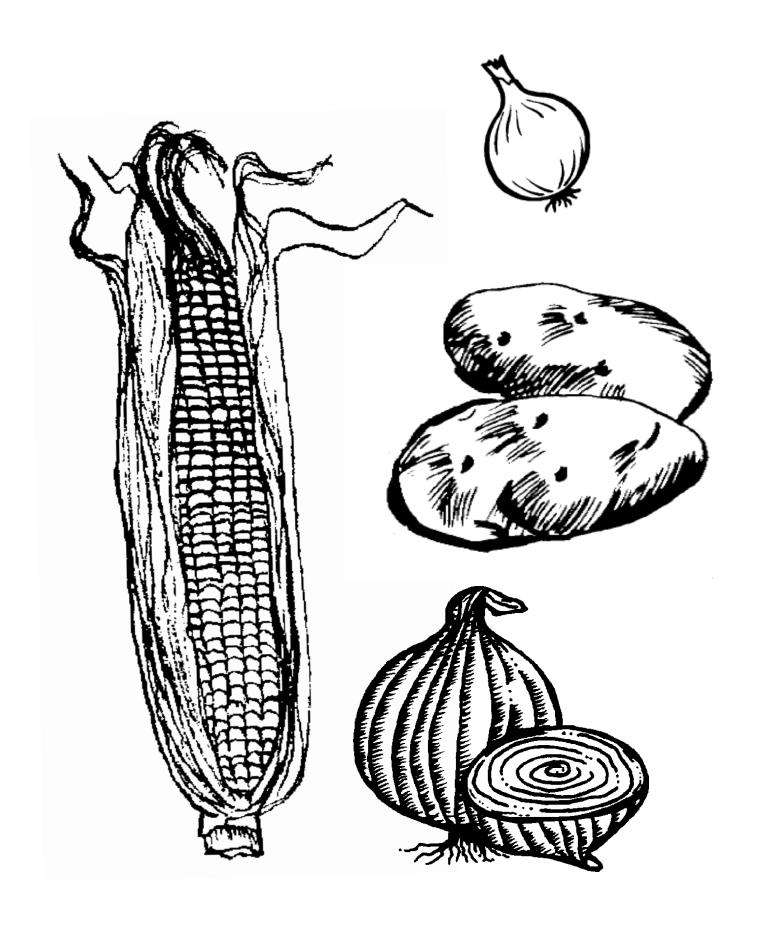






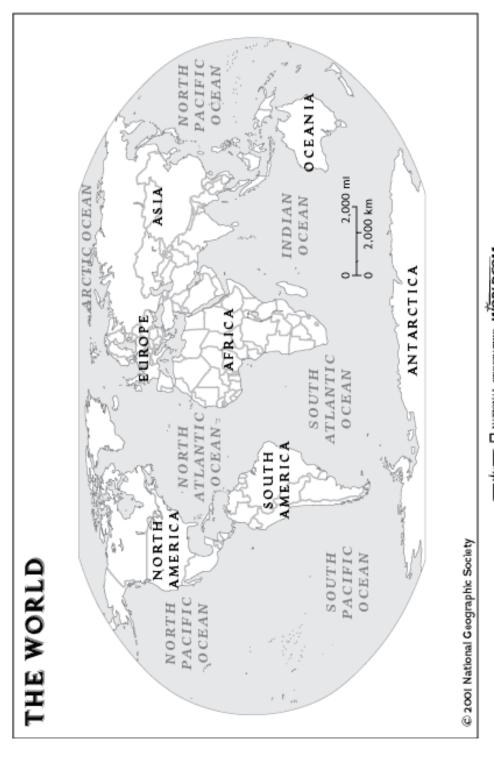






Enlarge and photocopy this map for group work in the mapping exercise

If desired, you can download a copy from:
http://www.nationalgeographic.com/xpeditions/atlas/index.html?Parent=world&Mode=b&SubMode=w





Supplementary Activity #1

Grades 4-7

Tracing Food Throughout the Ages: Conducting An Intergenerational Interview

Description

Students will interview an elder in their community (a grandparent, friend, nanny...) about where food came from when they were young. Students will bring the information they found back to the class where they will work to translate it into a classroom mural. If desired, they can make one end of the mural, illustrations of where food came from in the past, and the other end illustrations of where their food comes from now.

Objective

To connect the relevancy of food security to personal experience. To learn how food systems worked in the past.

To express ideas and information in a creative way.

Time

3 hours: I hour for at home interview, 2 hours for classroom mural

Materials

Notebooks and pens for at home interview
An interview subject (i.e. an elder in the community)
Craft paper for the mural
Paints and paint brushes or other art supplies

Let'sGb!

- l. Brainstorm, with your class, a list of questions they should use when interviewing their elder (see below for examples).
- 2. Explain the interview assignment and set a date for completion of the interviews. Give the students at least one week to independently conduct their interviews.
- 3. On the pre-determined date, have students present what they found in their interview. Note the ideas on paper at the front of the class.
- 4. Review the ideas, highlighting the most common findings.
- 5. Divide the ideas up amongst the students, individually or in groups.
- 6. Roll out paper and dig in to paints, crayons, markers, etc. designing a big bright banner that represents the stories the students have heard.



7. Find a wall in the classroom or school where the students' work can be displayed.

Sample Questions for the Interview...

Where did your food come from when you were little?
Did your family have a garden?
Did you know the people who grew the food you ate?
Did your family buy food?
Where did you buy food?
Did the food travel far to get to the grocery store?
If you went to a grocery store, how big was it? When was it open?
What foods do you like now, that you didn't have when you were little?
Did you have - - (insert student's favourite food)?



Backgrounder #3

The Implications of a Global Food System

From environmental degradation to social dislocation, the global food system we have come to depend on has some serious implications. Comparative "advantage" is full of disadvantages. The lone business of transporting food up to 2000km from field to table results in non-renewable resource depletion, air pollution and loss of food vitality. In addition, the methods employed to mass-produce food for an export market are decidedly unsustainable and often unjust. Following is a brief overview of some of the implications of the global food system.

Environmental Implications

- I. Depletion of Non-renewable Resources: Every stage of production and subsequent handling of food in the global system is dependent on non-renewable resource inputs, especially fossil fuels. 13% of the world's energy is used for the global trade in food and goods.¹
- 2. Air Pollution: The Co2 produced when fossil fuels are burned during the transport of food, has a severe impact on air quality. 1/3 of global CO2 emissions come from transportation and 25% of vehicle trips are made to transport food.²
- 3. Soil erosion: Practices such as monocropping, employed in industrial farming, the primary style of farming in the global food system, have had a serious impact on soil quality. The intensive potato farming industry in PEI and New Brunswick has led to the loss of 20 tons of topsoil per hectare per year in those provinces.³ This is a serious concern when one considers that it takes nature at least 30 years, and up to 300 years, to produce 2.5cm of topsoil.⁴
- **4. Pesticide run-off:** The chemicals industrial farming depends on for production can have severe effects on sensitive ecosystems. 5 billion pounds of pesticide are used worldwide each year. Global pesticide use increased 1300% from 1945 to 1980. Despite this fact the area of crops lost to pests almost doubled.⁵
- 5. Water Pollution: Soil erosion and pesticide run-off from farmland affect water quality. This, in turn, affects fish stocks and other wildlife that depend on natural water supplies. In 1986, Ontario was paying \$91 million to counter the effects of soil run-off (sedimentation) in the Great Lakes.⁶
- **6. Loss of Sensitive Ecosystems**: Between 1951 and 1986 in Canada, over 6.5 million acres of agricultural land was lost, much of it prime farmland. Hedgerows, woodlots and wetlands are examples of important ecosystems that are destroyed by industrial agriculture and urbanization. The bio-diversity and animal habitat in these areas is subsequently endangered.
- 7. **Biodiversity**: The United Nations Food and Agriculture Organization estimates that since 1900, approximately 75% of crop genetic diversity has been lost as farmers have switched from cultivating a large number of diverse food crops to a relatively small number of closely related high yield varieties. Today, the world relies on 20 crops for 90% of its food (wheat, sugarcane, potato, soybean, rice,















oats, corn, barley, cassava, sweet potato, grape, sorghum).9

8. Garbage: Packaging is an important component of the global food system, in which foods are packaged in order to travel long distances. Packaging accounts for 50% of solid waste in North America. Landfills grow every year and result in habitat destruction as well as soil and water pollution. In the Capital Region, every man, woman and child generates an average of 1.8 kilograms of solid waste per day, 40% of which is recyclable. Approximately 140,000 tonnes of garbage is dumped every year at Hartland landfill (Victoria, BC).

Human Health Implications

- 1. Pesticide poisoning: 85-95% of our exposure to poisonous chemicals comes through our food, ¹² primarily from pesticide residue left on industrially farmed products. In the U.S., 20 million children five and under eat an average of eight pesticides a day, every day a total of more than 2,900 pesticide exposures per child per year, from food alone. ¹³ Many of the 5 000 different chemical pesticides are toxic substances that penetrate fruits and vegetables and cannot be washed off. ¹⁴
- 2. Toxic Nutrition: We ingest chemical pesticides, herbicides, fertilizers, fungicides, additives, colourings, preservatives, flavorings, hormones, nitrates and other miscellaneous chemicals to total as much as our entire body weight every ten years. By the time an ordinary apple reaches the fresh produce shelf, it has been dipped in fungicide, bathed in chlorine, scrubbed with detergent and polished with wax. 16
- 3. Loss of Food Vitality: Food loses vitality and nutrients in the long haul between harvest and consumption in the global food system. People receive less nutrition for their dollar value when purchasing food that is harvested long before consumption. A study by Mary Eheart and Dianne Odland shows that, even under optimal storage temperatures, green beans lose 60 percent of their Vitamin C in the first three days after harvest. To

Economic Implications

- **l. Cost:** The transportation, refrigeration and storage used in the global food system increase the costs of distributing food.
- 2. Loss of farmers' livelihoods: In 1911, 34% of the Canadian workforce worked in agriculture, now 3% does. Between 1976 and 1986, Canada lost more than 45,000 farmers. In many developing countries, agribusinesses have bought out the most fertile land. Local people, losing access to good land, have no choice but to move to the city or work for the agribusinesses, who often pay low wages and provide poor working conditions.
- **3. Poor return on the dollar:** Of the \$40 billion Canadians spent on food in 1982, only \$12 billion was earned by farmers. The remaining \$28 billion went to corporations that processed, packaged, promoted, transported and sold it. Farmers share of the consumer food dollar dropped 20% between 1974 and 1984. ¹⁹

4. Monopolies: 12 major corporations control production of over 90% of the 15,000 items in a typical supermarket and six or fewer companies control around 70 per cent of world agricultural commodity trade.²⁰ Such monopolies in a market limit consumer choice and decrease competitiveness in the marketplace.

5. Trade Deficit: In 1999, we had a \$3 billion food trade deficit in British Columbia.²¹

Community Implications

- **l. Inaccessibility**: In the global food system, individual communities rarely have more than 3-4 days of fresh food stockpiled locally.²² When one considers the impact a disaster, such as an earthquake, could have on transportation systems, this lack of food stockpiles becomes a serious concern.
- 2. Export Orientation: When communities are focused on growing food for export, they are left with little land and time to attend to their own food security. This is an especially serious concern in developing countries where the production of cash crops for export has been prioritized rather than food for domestic consumption. As a result, over 50% of all food consumed by people in the cities of the developing world is imported from other countries.²³ Hunger and malnutrition is a serious problem in rural and urban areas.
- 3. Disconnection from the Land: Studies show that many children no longer know that food comes from the earth. Raised in cities, with supermarkets as their source of food, they have become extremely disconnected from the source of life, the land.

Sustainable Alternatives

The practices of local ecologically based agriculture directly address many of the negative implications of the global food system. This agriculture is decidedly small-scale, organic and rooted in appropriate technology. Urban Agriculture, the process of growing food in urban spaces, is an important component of this system. Ever since people gathered together to create cities, food has been grown in them. When food is grown close to the place of consumption there are environmental, economic, social and health-related benefits. Food security advocates are increasingly looking at urban agriculture as a positive alternative to reliance on an insecure import system.

Environmental Benefits

- **I. Preservation of Non-Renewable Resources**: When food is grown close to the location of consumption, the need for fossil fuels for transportation is dramatically reduced.
- 2. Air quality: Urban green spaces, created by urban agriculture, act as carbon sinks, recycling air and improving air quality. The decreased need for transportation, when food is produced close to the location of consumption, also reduces reliance on fossil fuels and the associated CO2 production.



- 3. Preservation of Natural Areas and Farmland: When urban space is allocated for agricultural purposes, rather than concrete and steel development, the city is beautified with greenery and habitat is created for animals and insects.
- **4. Noise:** Green spaces absorb noise, therefore decreasing noise pollution, a growing concern in busy urban areas.
- 5. Nutrient Recycling: Urban farms use organic waste for compost. This diverts waste otherwise destined for landfills. When organic waste is returned to the site of original production, the nutrient loop is closed and soils retain their quality.
- 6. Biodiversity: Small-scale gardeners tend to grow a wider variety of fruits and vegetables than large-scale growers, conserving unique produce varieties that might otherwise die-out.²⁴ A diversity of landscapes in the city attracts a variety of bird and animal life that would otherwise not survive in the urban environment.

 7. Decreased Garbage: When food is grown close to the location of consumption
- 7. Decreased Garbage: When food is grown close to the location of consumption, the need for packaging is reduced. In turn, landfills expand less rapidly.

"When we change the way we grow our food, we change our food, we change our society, we change our values." (Masonobu Fukuoka, The One Straw Revolution)

Economic Benefits

- **1. Cost**: When food is grown close to the location of consumption, the need for costly transportation, packaging and refrigeration is decreased. In addition, urban farms frequently support farmer-consumer cooperatives and exchange and barter systems, which provide low cost alternatives for people living on a low-income.²⁵
- 2. Jobs: When urban agriculture is demanded locally, job opportunities are created. These opportunities are found in farming and gardening, supply of seeds, tools and other needed inputs, compost making and supply, food processing, marketing and distribution.
- 3. Farmers' Livelihoods: As more food is grown locally, land in developing countries is liberated for domestic production and farmers there can reclaim their independent livelihoods. Farmers' share of the consumer dollar is increased in all countries as transportation, packaging and refrigeration costs are decreased.

Community Benefits

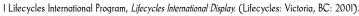
- **l. Connections**: When food is sold directly from farmers to the public, farmers can develop closer relationships with their customers; their work becomes more personal and fulfilling.
- 2. Stewardship Ethic: When food is grown closer to source of consumption, opportunities for education are increased. When city residents are involved in cultivating their own food, they may feel especially close to the land and be encouraged to take good care of it.
- 3. Conscious Consumption: When food is grown locally, especially in the CSA model, people have more control over the means of production and can ensure that their food is produced in a humane way, without human or environmental exploitation.
- 4. Play-space/Peaceful place: Green spaces provide needed calming, educa-

tional locations for people to play, rest and revitalize in the midst of urban development. Gardens attract birds and other wildlife that many people enjoy observing.

5. Accessibility: When food is grown closer to the source of consumption, there is greater assurance of a steady food supply regardless of transportation or political difficulties.

Human Health Benefits

- 1. Fresh and healthy food: When food is grown close to the source of consumption, it can travel from field to plate in a matter of hours, even minutes. This rapidity preserves nutrients and vitality in food.
- 2. Chemical-free food: The principles of urban agriculture include chemicalfree farming. Food grown without chemical inputs is known to be healthier. A study supported by the US Dept. of Agriculture indicates that, on average, organic crops have up to 30% more vitamin C, iron, magnesium and phosphorous than conventional crops.²⁶



3 Philip White, The Supermarket Tour. (Ontario: OPIRG, 1990), 38.

4 Gary Lawrence Fairbairn, Will the Bounty End? (Saskatoon: Western Producer Prairie Books, 1984), 75, cited in White, The Supermarket Tour, 38.

5 Lifecycles International Program, Lifecycles International Display.

6 Science Council of Canada, A Growing Concern: Soil Degradation in Canada. (Ottawa: Ministry of Supply and Services, 1986), 25, cited in White, The Supermarket Tour, 39.

7 Rod J. MacRae et al. "Policies, Programs and Regulations to Support the Transition to Sustainable Agriculture in Canada," Research Paper #10, (Montreal: Ecological Action Projects, 1989), 34, cited in White, The Supermarket Tour, 39.

8 Stella Lee et al, The Supermarket Tour. (Hamilton, ON: OPIRG McMaster, 2001), 30-31.

9 Kari Jones, Teacher Gram: Food Security. (Victoria, BC: Lifecycles and VIDEA, 1996).

10 Pam Bristol, 'Garbage Crisis - Packagers Facing Legislation," Food in Canada 48, 4 (April 1988): 42, cited in White, The Supermarket Tour, 18.

Il Capital Regional District, Hartland Landfill: A closer look at the Capital Regional District's landfill facility, 29 January, 2001, <www.crd.bc.ca/hartland/intro.htm> (21 March 2002)

12 Lifecycles International Program, Lifecycles International Display.

13 Stella Lee, The Supermarket Tour, 18.

14 Environment Canada, "Glossary of Selected Terms," The State of Canada's Environment 1996 Report (Environment Canada:

15 The Planting Seeds Project, Putting the Culture Back in Agriculture, (Vancouver: Circling Dawn Organic Food, 2000). 16 Phillip White, The Supermarket Tour, 17.

17 Henry Brockman, Organic Matters, October 2001, http://www.consciouschoice.com/food/organicmatters1410.html (21 March 2002).

18 Ray Bollman and Philip Ehrensaft, Net and Gross Rates of Land Concentration, Social and Economic Statistics Division (Ottawa: Statistics Canada, 1988), cited in White, The Supermarket Tour, 3.

19 Carole Giangrande, Down to Earth: The Crisis in Canadian Farming (Toronto: Anansi Press, 1985), 129, cited in White, The Supermarket Tour, 21.

20 Oxfam, The Business of Food.

21 BC Ministry of Agriculture, Food and Fisheries. British Columbia Food and Fisheries at a Glance. (Victoria: BCMAFF, 2001). 22 Island Farmers Alliance. (Victoria: Island Farmers' Alliance, 2002).

23 Catherine Murphy, Cultivating Havana: Urban Agriculture and Food Security in the Years of Crisis. (Oakland, Ca: Food First 1999), 5. 24lbid, 2.

25 William Rees, "Why Urban Agriculture?" Notes for the IRDC Development Forum on Cities Feeding People. 1997, <www.cityfarmer.ca> (21 March 2002).

26 Clinical Pearls News, Organic vs. Conventional: Nutritional Benefits and Exposure Impact, January 2002,



Activity #3

All Grades

Visualizing Change in the Global Food System

Description

In this activity, your students will be led through a visualization in which they will take on the identity of an animal, the environment, a farmer, or a consumer. From the perspective of this identity, they will consider the effects of the global food system, and the alternative of local production. To conclude the activity, they will present their findings to the class.

Objective

To stimulate students to think about how the global food production system, and the alternative of local production, affects different aspects of their community.

Time

20-30 minutes

Materials

Markers and Paper for students to brainstorm and draw pictures on Classroom assistants to work with each student group

Let's&!

- l. Divide your class into four groups and allocate an assistant to work with each group.
- 2. Inform groups of which "identity" they will be taking on an animal, the environment, a farmer or a consumer.
- 3. Hand out paper for students to draw or brainstorm on.
- 4. In small groups, lead students through a brief visualization of what it would be like to be their identity (see sample visualizations).
- 5. Moving through the group, ask each student for one idea on how their identity is affected by the global food system and, alternatively, how it can benefit from a system of local production.
- **6.** Give students time to contribute their own ideas, then, if necessary, ask them to remember the opening skit and consider what the tomato had to say.
- 7. <u>Grade 2/3</u>: Have students create simple drawings that illustrate what they have learned.
- **8.** $\underline{Grade 4/5}$: Have the group create a simple skit that conveys what they have learned.
- 9. $\underline{Grade 6/7}$: Have the group organize their ideas into a logical sequence and prepare a brief presentation for the class.
- 10. Have students present their drawings, skits or presentations to the class.



Now You Are... An Animal

Sample Visualization

Imagine that you are a squirrel, soft and furry, scampering through the city streets. It is a hot day and the heat from the pavement burns your little feet. You are hungry, and looking for a place to drink, eat and rest. There's not a lot to be found in these streets though; they are full of people, buildings and cars, cement and steel and pollution. But wait, there's a garden! Smack dab in the middle of the city! It's fresh and green and quiet and there are other animals there too, resting in the cool shade of the plants and trees. Mmm...you smile as you enter the garden gates, hopeful for what you have found.

or...

Imagine that you are a bird. You are up high in the air, flying through the city – your home. It is a bit hazy and gray, but you can still see all the regular land-marks... high rises, houses, highways and parking lots. There seems to be a lot of traffic today. (Coughing). All that noise and smog is hard to get away from. But wait! Out of the corner of your eye, you glimpse a patch of green. Mmm...an urban garden. You sail down into that cool oasis and rest your weary wings for a while.





Grade 2/3 Points to Address with your Class

- Q. What are the basic things all animals need to survive?
- Air, water, food and shelter.
- Q. Do you think these things are easy to find in a city without gardens?
- No, not <u>healthy</u> air, water, food and shelter.
- Q. How would having a garden help animals get these things?
- Bushes and trees provide shelter and material for nests.
- Food and insects provide nutrition.
- Plants recycle the air, making it cleaner.
- Garden ponds or pools provide water.
- Leaves and trees also collect water when it rains.

A healthy, safe habitat can prevent animals from becoming sick, endangered or extinct.

Grades 4/5/6/7 Points to Address with your Class

- Q. What affect does urbanization have on animals?
- Q. How does it affect their ability to access clean air, water, food and shelter?
- Q. How does the global food system contribute to their problems?
- The expansion of cities destroys the natural habitat and food sources of wildlife (i.e. wetlands are paved over).
- As cities expand, many animals move away or are killed.
- Toxic emissions from factories and vehicles (i.e. driving food in from California) pollute the air, required by all living creatures.
- Garbage (i.e. from food packaging) fills up dumps, destroying habitat
 and polluting water supplies. Polluted water is a great threat to wildlife,
 especially fish and others living in the water.

Q. How would animals benefit if we grew more food in the city?

- Bushes and trees would provide shelter and materials for nests.
- Food and insects provide nutrition. As one animal is nourished by a
 green space, so are others. Insects thrive on the plants, while birds thrive
 on the insects and cats thrive on birds. Multiple species are supported.
- Plants are like the lungs of our planet, recycling the air and cleaning it of toxic pollutants.
- Ponds or pools of water provide bathing and drinking places for animals.
- For smaller animals and insects, the water collected by leaves and trees when it rains are a benefit.

A healthy, safe habitat can prevent animals from becoming sick, endangered or extinct.

Now You Are... The Environment

Sample Visualization

Imagine you are the environment. You are the air, the water, the plants and the soil. For a long time you've been polluted by people driving over you, dumping garbage on you and putting chemicals in you. But you have hope, because some people are talking about growing food locally. Why is this good for you?

or...



Imagine you are the environment. You are the air, the water, the plants and the soil. For a long time you've been degraded by the expansion of cities, toxic emissions from traffic and factories, the increasing size of garbage dumps... You re sick and tired and are having a harder and harder time supporting the beings that live on you. But, you feel hopeful. You know that some people want to take better care of you. How do you think locally grown food would contribute to this?

Grade 2/3 Points to Address with your Class

Q. If food was grown locally, instead of being brought to us from far away, would the earth be more or less polluted?

- Less distance travelled = Less air pollution.
- Less distance travelled Less packaging -Less garbage Less landfills.
- Less distance travelled = Less chemical preservatives on our food.

Q. If more plants were grown in the city, how would the air and water be affected?

- Plants clean the air and reduce pollution.
- Flowers encourage insects to come and pollinate plants, therefore helping more flowers to bloom and plants to grow.
- When people work in their gardens, they feel closer to nature and want t to look after it more.

Grade 4/5/6/7 Points to Address with your Class

Q. How does the long distance transport of food affect the environment?

- Shipping food long distances emissions from trucks air pollution global warming
- Shipping food long distances packaging to preserve food garbage garbage dumps
- Shipping food long distances = use of chemical preservatives to preserve food = chemicals being leached into the environment

Q. How does the local production of food, especially through urban agriculture, encourage a healthier urban environment?

- Plants recycle the air and reduce pollution.
- Gardens attract beneficial insects, which help flowers to bloom and plants to grow.
- Green spaces absorb noise, making the city a more peaceful place.
- When people work in their gardens, they feel closer to nature and are encouraged to take better care of it.



Now You Are... A Farmer

Sample Visualization

Imagine you are a farmer in Victoria. It has been hard making money lately because people buy most of their food from other provinces and countries. But now some people are realizing that it's better to buy food grown close to home. What are the benefits for you?

or...

Imagine you are a farmer in Victoria. You have a small, organic family farm with a variety of produce. You really love growing food, but it has been hard making a good living at it. Most people buy imported food from the grocery store, rather than seeking out your locally grown produce. You were beginning to think that you should specialize what you grow and ship it to foreign markets. But you'd rather not. You've started to talk to some families in the community about buying your food. If you can arrange something with them you'd be really happy.

Grade 2/3 Points to Address with your Class

- Q. What would local farmers get if more people buy their food?
- When more people buy food from farmers, farmers earn more money to support their families.
- Q. Why would farmers be happy if they didn't have to ship their food away to sell it?
- When you sell your food locally, you don't have to pay for trucks to transport it far away.
- You also don't have to pay for preservatives or packaging.
- You can get to know your customers and make new friends.

Grades 4/5/6/7 Points to Address with your Class

Q. In what way would farmers benefit if more people decided to buy locally grown produce?

- When more people buy local food, farmers can expand and diversify their produce and therefore make more money. (Most small farmers have to work outside of their farms to make money).
- When food is sold locally, farmers can develop closer relationships with their customers and their work becomes more personal and fulfilling.

Q. How would farmers benefit if they could sell their food locally, rather than shipping it great distances?

- When food is sold locally, a farmer doesn't have to pay for transportation.
- When food is sold locally, a farmer doesn't have to pay for the preserva tives or packaging needed for long distance transport.

Now You Are... A Consumer

Sample Visualization

Imagine that you are hungry. You need something to eat. But you have to make a choice. You can go outside your house and pick something fresh from the garden; or you can walk to the grocery store and pay for some food that has been brought from far away. What would be the smart choice to make? Why?

or...

Imagine that you are the one who does the shopping in your family. You have a tight budget and not a lot of time, but you want fresh, healthy food for your family. You go to the grocery store and see shelves and shelves of food imported from California and Mexico. A lot of it is wrapped in unnecessary packaging, it's not organic, it's a bit bruised and it certainly isn't cheap. You start thinking that maybe it's time you started growing your own food or buying it from a farmer near by. Why?





Grade 2/3 Points to Address with your Class

Q. What is the difference between food grown in our own backyard or one close by, and food that has come from far away?

- Local food is fresher.
- Local food is healthier.
- Local food doesn't need to be packaged.
- Home grown food is more accessible.
- Home grown food is cheaper.

Q. What are some other reasons people like gardens?

- Gardens are nice places to play in.
- Gardens attract pretty birds and insects, which are fun to watch.
- Plants clean the air and make it healthier for people to breathe.

Grades 4/5/6/7 Points to Address with your Class

Q. What is the difference between food grown in our own backyard or one close by, and food that has travelled up to 2000 km from a distant place?

- Local food is fresher and healthier because it can be harvested and eaten within hours.
- Imported food ages and loses nutritional value as it travels.
- Local food doesn't need to be packaged.
- Imported foods tend to be heavily packaged for transportation and preservation.
- Local food can be grown in an assuredly just fashion.
- Imported food is often grown by exploited people who are paid a low wage.
- Home grown food is accessible. You can pick food from your garden whenever you want.
- In emergencies (such as an earthquake) our access to imported food could be cut off.
- Home grown food is cheap.
- Imported food can be expensive because it includes the cost of transportation and storage.

Q. What are some other ways in which we can benefit from gardens in the city?

- Gardens are peaceful places to play and learn about nature.
- Gardens attract insects and birds which many people enjoy watching.
- Plants purify the air and decrease air pollution, which makes the air healthier for us to breathe.
- Urban Agriculture provides jobs for our families in growing, harvesting, processing and selling food from local farms.

Supplementary Activity #2

All Grades

There's a Story to be Told Here

Description

Based on the ideas discussed in the visualization activity, students will write a story in the character of an animal, the environment, a farmer, or a consumer, in which they address the benefits to them of local urban agriculture.

Objective

To expand the understanding gained in activity #3 about the effects of the global food system and urban agriculture on a variety of players in our community. To express ideas in a creative way.

Time

30 minutes, in addition to time for activity #3

Materials

Pen and paper

Let's&b!

- 1. Complete the activity #3.
- 2. Display the brainstorming sheets from each group at the front of the class.
- 3. Have students chose an identity that was addressed in activity #3.
- 4. Have students bring out paper and pen and write a brief story in the voice of that identity.



Supplementary Activity #3

Grades 2-5

The Locally Grown Word Search

Description

In this activity, your students will complete a word search, in which the words they are looking for describe the benefits of locally grown food.

Objective

To reflect on the benefits of local, urban agriculture.

Time

15 minutes.

Materials

Photocopies of the Locally Grown Word Search

Let's&!

I. Hand out copies of the Word Search.
Instruct students to work individually, or in groups, to complete it.



LOCALLY GROWN WORD SEARCH

Can you find the words that describe the benefits of locally grown produce?

| Z | X | \mathbf{C} | \mathbf{V} | B | N | M | L | K | J | S | H | G |
|--------------|---|--------------|--------------|--------------|---|--------------|--------------|---|--------------|--------------|--------------|--------------|
| I | U | Y | T | R | E | W | Q | A | S | A | D | F |
| O | Y | T | I | N | U | M | M | 0 | \mathbf{C} | N | P | A |
| P | Q | W | \mathbf{E} | A | R | T | Y | U | I | \mathbf{C} | O | S |
| M | N | \mathbf{C} | X | T | L | H | A | B | I | T | A | T |
| J | B | \mathbf{V} | Z | U | K | E | J | H | G | U | F | D |
| Q | W | \mathbf{E} | 0 | R | G | A | N | I | \mathbf{C} | A | R | \mathbf{C} |
| R | I | U | A | \mathbf{E} | B | L | V | H | F | R | T | \mathbf{L} |
| \mathbf{E} | O | Y | Q | S | N | T | \mathbf{C} | J | G | Y | Y | \mathbf{E} |
| W | P | T | W | D | M | H | X | K | F | D | U | A |
| L | O | \mathbf{C} | A | L | L | Y | * | G | R | O | W | N |
| Q | M | H | \mathbf{E} | L | B | I | S | S | \mathbf{E} | \mathbf{C} | \mathbf{C} | A |
| Z | N | G | O | 0 | D | J | 0 | B | S | S | I | I |
| X | B | A | R | G | K | J | Z | L | H | A | O | R |
| G | N | I | G | A | K | \mathbf{C} | A | P | S | S | \mathbf{E} | L |

Locally Grown Sanctuary Nature Habitat Fresh Good Jobs Accessible Clean Air Community Healthy Less Packaging Organic



Backgrounder #4

Cuba: the New 'Green Revolution"

The country of Cuba provides a globally important example of local food systems for farmers and activists all over the world. It has one of the most extensive systems of state-supported urban agriculture in the world, as well as one of the broadest programs for organic farming. The food grown in Cuba's cities supply up to 60% of the food needs for the people who live there. It also acts as a catalyst for jobs, education and community building.

Cuba has come a long way in developing its system of agriculture. Until 1989, Cuba's agricultural sector, like many in Latin American countries, was largely export-oriented. In it's early years it produced sugar cane for Spain, and later for the United States and then Russia. All of these trade relations jeopardized food security in Cuba. Only a minimal amount of land was allocated to production for the domestic market, as the majority of land was taken up with cash crops for export. The money earned from exporting sugar cane was used to import food and goods from other countries, hence promoting an import-dependent system. By the mid-1980's over 50% of the total foodstuffs consumed in Cuba were imported, the same amount as is imported into B.C. today.²

Yet, Cuba's import-export orientation was not to last. When the USSR broke up, Cuba lost its best market for sugar cane exports and its major source of foreign currency and cheap petroleum, in total over 80% of its import capacity.³ Its economy sunk into crisis. Due to a long-standing dispute based on ideological differences, Cuba was unable to reach out to the U.S. or other countries to diversify its markets. In fact, in the moment of crisis, the U.S. passed a bill tightening the already existing economic blockade against Cuba. This bill banned all sea vessels that had been to Cuba from docking in the US within six months. Few countries wanted to risk their relationship with the US in order to trade with Cuba. Cuba's import-export market dried up completely.⁴

The absence of foreign exchange meant that Cuba could not import the basic foodstuffs to provide even the minimum nutritional requirements for its population. People went hungry. There was an estimated 30% reduction in caloric intake in the early 1990's. The country was in severe crisis. It was faced with the dual challenge of doubling food production to make up for lost imports, while having only half the previous inputs for industrial agriculture. Farmers growing for the domestic market were left without fuel for their tractors or fertilizers and pesticides for their fields. Annual petroleum imports fell from 13 million tons to under 7 million tons in only three years. Domestic food production plummeted. Other services crucial to food supply, that were dependent on petroleum, such as storage, refrigeration and distribution networks, nearly ground to a halt.⁵



Cuba responded to the crisis with a national call to increase food production by restructuring agriculture. The conversion from conventional, large scale, high input, monocrop agriculture to a smaller scale, organic and semi-organic farming system was the largest the world has ever seen. It focused on utilizing local low-cost and environmentally safe inputs and relocating production closer to consumers in order to cut down on transportation costs. As 80% of the population of Cuba lives in the cities, and there is 3485 hectares of arable land within the city limits of Havana, urban agriculture became a fundamental component of this restructuring.

Prior to the period of crisis, urban gardening in Cuba was associated with poverty and underdevelopment. Havana even had city laws prohibiting the cultivation of agricultural crops in front yards. Urban agriculture was virtually non-existent. Yet with the crisis and increasing hunger, urban gardens began to spring up throughout the city. The Ministry of Agriculture and the Havana Municipal Government responded to this spontaneous development by providing needed services and facilitating the expansion of the movement. In 1994, The Ministry of Agriculture created the world's first coordinated urban agriculture program in Havana, with the goal of putting all the city's open land into production.⁷

City laws were changed so that gardeners would have legal priority for all unused spaces. Even privately owned land in the city, if not in use, was turned over to those who wished to cultivate it. By 1998, over 8000 city farms were created in Havana, cultivated by more than 30, 000 people. In that same year, an estimated 541,000 tons of food were produced in Havana for local consumption.⁸

Havana's city farms are organized into three main categories:

- **1. Huertos Populares (People's Gardens)**: Small parcels all over Havana created in yards, on balconies, patios and rooftops and cultivated by private owners. By the end of 1997, there were over 26,000 popular gardens covering 2000 hectares of land in the city. An average of 10 people eat out of each garden. Surplus production from these gardens is either sold or donated. In 1995, 80% of Havana's gardeners donated a regular amount of produce to primary schools, daycare centers, and retirement homes in their neighborhoods.
- 2. Autoconsumos: Self-provisioning gardens where food is grown to feed the residents and employees of a specific school, factory, hospital, research station, or workplace. In Havana there are almost 400 autoconsumos with a total of 6365 hectares of land. Even the Ministry of Agriculture tore up the grass and created an automconsumo on the front lawn of their modern headquarters in Havana. Surplus from these gardens is sold to workers at state prices, much lower than those at the farmers' markets.
- 3. Empresas Estatales: State businesses that grow food for the market. These are increasingly decentralized and autonomous, and have varying degrees of direct profit sharing with workers.¹⁰



Many gardens in Havana are designed in the organiponico model. Organiponicos are gardens in raised container beds with a high ratio of compost to soil as a growing medium. These gardens are particularly suited to urban land where the soil can be contaminated, extremely compacted, or nonexistent. The organic material is changed every six months, which allows for high yields and year-round production. Of the 451 organiponicos in Havana, almost half are state run and operated autoconsumos. Many of the high yield organiponicos also serve as educational and information sites.

A National Agricultural Program provides Cuban farmers with technical support, research, education and a network of extension workers. There are also many production incentives for farmers who have the option of selling through state channels or at public farmers' markets outside of the city. At these markets they can earn significantly more for their goods, although they must supply transportation. In the city, food must be sold for 20% less than at the farmers' markets. This discounted rate encourages urban residents to buy local produce. Lower pricing hasn't negatively impacted farmers though; overall, deregulation of prices, combined with high demand for fresh produce in the cities, has allowed urban farmers to make two to three times as much as professionals.

The success story of Cuban agriculture is shared by producers, consumers, and the environment. The new system of production in Cuba is decidedly ecological. The lack of access to petroleum and chemical inputs that resulted from the meltdown of foreign trade relations, meant that alternative production techniques had to be developed. These techniques include organic fertilizer, animal traction, mixed cropping, and biological pest controls. Cuba's production is more diversified, integrated, and smaller in scale than it was before. It is great source of pride for the Cuban people.

Other cities in the world have much to learn from the Cuban experience. Havana has proven that a large city with a history of dependence on food imports can dramatically increase community food security by supporting local sustainable production. It is a lesson to be inspired by.

1 Lifecycles International Program. Lifecycles International Display.

2 Catherine Murphy, Cultivating Havana: Urban Agriculture and Food Security in the Years of the Crisis.

3Minor Sinclair, Cuba: Going Against the Grain. (Oxfam: Boston, Ma, 2001), I.

4 Catherine Murphy, Cultivating Havana: Urban Agriculture and Food Security in the Years of the Crisis.

5 ibid

6 Cathy Holtslander, *From Vacant Lots to verdant Plots: Farming in Havana City," Synergy Magazine 9.1 (Synergy Co-op: Saskatoon, SK. 2000), 9.

7 Catherine Murphy, Cultivating Havana: Urban Agriculture and Food Security in the Years of the Crisis.

8 ibid

10 ibid

ll ibid

12 Minor Sinclair, Cuba: Going Against the Grain, 2.

13 ibid



Activity #4

All Grades

A Letter from Esmeralda

Description

In this activity, your class will explore how Cuba has revolutionized its food system and instituted the world's largest program of Urban Agriculture. Powerpoint slides or web-based pictures, accompanied by a letter from a child in Havana, will lead them through the story.

Objective

To visually explore Cuba's food production system and compare it with Vancouver Island's.

To visually explore local alternatives which would increase production of food on Vancouver Island and in B.C. in general.

Time

10 minutes

Materials

Computer(s) and the Lifecycles website

Or slides on cd rom, powerpoint projector and screen

Or slides, slide projector and screen

Black garbage bags to darken classroom windows if there aren't any blinds

Let'sCb!

l. Before you begin this activity you will need to decide what visual presentation you will use. You can lead your class through the slideshow on the Lifecycles website at www.lifecyclesproject.ca. Alternatively, if you have access to a powerpoint projector, you may wish to order the slide show on CD Rom from Lifecycles and provide a slide show for your class.

- 2. a. Access the Lifecycles website.
- b. or Set up the screen and projector.
- 3. If necessary, close the window blinds or cover the windows with black garbage bags to make the classroom dark.
- 4. Introduce the show.
- 5. Read Esmeralda's Letter as you move through the visual show.
- 6. Once the show is complete, answer questions from the students.



Esmeralda's Letter

The following letter accompanies the web-based pictures or powerpoint slides that you will use in Activity #4.

Slide Letter Dialogue

- March 21, 2002 Havana, Cuba
 Hola Amigos (Hello Friends!),
 I am writing to you from the beautiful city of Havana, Cuba.
- 2. As you can see, it's a big city. About two and a half million people live here, as many people as live in Vancouver. As you can imagine, it's a very busy place, with lots of people and buildings, noise and activity.
- 3. It's different than a lot of cities though. One of the big differences is that we grow food right in the city.
- 4. In Havana, we grow vegetables, herbs, flowers and medicines right in the midst of the people and roads and buildings. It's great!
- 5. We don't have to depend on imports from other countries for our food. We are independent!
- Food is grown in a lot of different ways in my city. The government has
 created big gardens called organiponicos, where the majority of food
 is grown.
- 7. You can see that they are big and very well organized.
- 8. Government ministries, such as the Ministry of Agriculture, and other organizations also grow food. Schools and hospitals have to grow food to feed the people that stay or work there.
- 9. Many families have their own gardens. Here are some pictures of gardens in my neighborhood. When people don't have a back yard, they find space on the sidewalk...
- 10. ...or use any old kind of container...
- II. ...or their rooftops. People are really creative!



| 12. | Some people keep animals in the city. They keep pigs |
|-----|---|
| 13. | bees |
| 14. | goats |
| 15. | and chickens. Because all of this food is produced in the city, it doesn't have to travel far to get to us. Our food is very fresh and healthy. It is also grown organically, so we don't have to worry about the dangerous effects of chemical pesticides. |
| 16. | Here is a man making an herbal pesticide from tobacco leaves |
| 17. | which he then sprays on his garden to keep the plants healthy. |
| 18. | Growers here also use natural compost to fertilize their gardens, like this compost made with worms. |
| 19. | We even collect rainwater for our gardens. This helps us to conserve precious water supplies. |
| 20. | We are really proud of the way our farming practices care for the environment. We're also happy to have Canada's support. Did you know that the Canadian government and other organizations have funded projects here? They've also sent professionals to work with us. We appreciate it! |
| 21. | Not everyone in Havana grows their own food; but it is easy for everyone to buy locally grown food. We can buy extra food that our neighbors have grown and aren't using. |
| 22. | We can also go to the organiponicos and buy food from the stands outside the gardens. |
| 23. | There are farmers' markets in Havana too. Farmers come from farms outside of the city to sell their produce. |
| 24. | Sometimes I go with my mum. It's a lot of fun! |
| 25. | I hear that you also have farmers' markets in Canada. Have you ever been to one? |



| 26. | My friend there tells me that you actually have many ways of |
|-----|---|
| | growing food close to home like we do in Havana. In your city |
| | there are family gardens |
| | |

- 27. ...community gardens...
- 28. ...and school gardens.
- 29. There are also programs where locally grown food is delivered to your home by the farmer who grows it.
- 30. And, when all else fails, you can buy locally grown food at the supermarket. There are special labels on the food to show it is grown in B.C. That's great!
- 31. I have one question though... why doesn't your government grow food on that big lawn outside of the Legislature, like our Ministry of Agriculture does here? What a waste of space!
- Well, I'm going to go help my grandparents in the garden now. I hope you liked my letter and photos. Take care! Esmeralda



Activity #5

All Grades

Exploring the World of Urban Agriculture

Description

In this activity your class will see that the urban agriculture movement in Cuba has caught on in other parts of the world, as you use the map to indicate cities that cultivate a significant amount of their produce within the urban confines.

Objective

To draw links between Cuba's system of urban agriculture and urban agriculture in other parts of the world.

Time

5 minutes

Materials

Large World Map

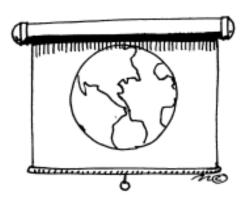
Let's&!

1. Invite students to bring their attention to the world map.

2. On the world map, point out other countries where food is grown close to home.

Points to Address with your Class

- Cuba grows the most amount of food locally, 8 out of every 10 food items.
- In Nairobi, Kenya 6.5 out of 10 things are grown locally.
- In Hong Kong 4.5 out of 10 things are grown locally.
- In Kathmandu, Nepal 3 out of 10 things are grown locally
- On Vancouver Island, only I out of 10 things we eat is grown locally (10%).
 This pales in comparison to Cuba!



Roberto's Letter: True or False?

Description

In this activity, students will read a fictional letter from a student in Cuba and reflect on what they have learned by answering true and false questions.

Objective

To understand changes that have occurred in Cuba's food systems and the growth of urban agriculture in that country.

To reflect on what has been learned through a game of true or false.

Time

20 minutes

Materials

Photocopies of Roberto's letter
Photocopies of the True/False Game

Let's&!

- 1. Hand out Roberto's letter to the class.
- 2. Have the class read the letter individually or as a group.
- 3. Answer the true and false questions individually, or as a group.





Roberto's Letter

Hello friend,

How are you? We are good. The weather here has been lovely and our garden is growing well. Did you know that we have our own garden now? Mama and Papa and I planted it last year. We are growing so many delicious fruits and vegetables. Mmm... having a garden is wonderful. We are able to walk out our front door and pick fresh, yummy food right from the earth. Of course, for the past 13 years our food hasn't come from very far away. Do you know what happened 13 years ago to change so much in our country?

Before 1989, we in Cuba relied on trade with the Soviet Union to earn money for importing food. We grew a lot of sugar cane and traded it to the Soviet Union for money to buy food from other countries. We didn't grow much of our own food, because our fields were full of sugar cane growing for the Soviet Union! This was okay for a while, but then there was a big crisis in the Soviet Union and the country fell apart. Suddenly, they weren't able to buy our sugar cane. And because we couldn't sell our sugar cane, we didn't have money to buy food! Yikes! No other countries wanted to buy our sugar cane because we have a special system of government in Cuba called Communism and many other governments don't like this. Other countries didn't want to trade with us.

Well, in 1989 we were suddenly stuck with a lot of sugar cane and not much money or food. We had to solve this problem fast because people were hungry! After a few years, the government came up with a great program. They encouraged people to grow food everywhere! Empty lots became food gardens, and so did school yards, parks, and even the lawns around government buildings and hospitals. Can you imagine?! Imagine growing food on the lawn of that Legislature Building you have in Victoria?! Wouldn't that be amazing! That's what it's like in Cuba now. Food is grown everywhere!

Some food is grown in gardens run by government employees. This food is distributing through small stores. Other food is grown in private gardens and sold out of people's homes or used by the families themselves. Schools grow food for their own cafeterias and so do hospitals, jails and many other places. There are so many food gardens in Cuba now. In Havana, the capital city, there are enough gardens to grow more than half of the fruits and vegetables people need! All of this food is grown organically. This means that the food is really healthy. It's cheaper to grow too. We don't have to pay a lot of money for chemicals to put in our gardens and we don't have to pay big fees for transporting food, because it's grown close to our homes. This is very different than before 1989 when we imported our food from as far away as the Soviet Union!





You should come visit one day and see all the food gardens we have in Cuba. I am so proud of them! I would love to come see your gardens too. I hear that you have one growing at your school. That's great! Maybe people on your island will begin to grow even more of their own food just like we do in Cuba. I would love to see that.

I'll write again soon! Your friend, Roberto

True or False?

1. Before 1989, Cuba relied on trade with Australia for money True False to import food. 2. After 1989, Cuba sold its sugarcane to the U.S. True False 3. People in Cuba grow their food organically, without using chemicals. True False 4. People in Havana started growing food in the city because they were hungry. True False 5. People in Havana never have to buy food because they grow it all themselves. True False 6. In Cuba, schools and hospitals grow food to feed the people who work there. True False 7. The gardens in Havana grow all the fruit and vegetables people need there. True False 8. Roberto is proud of the food gardens in Cuba. True False



Backgrounder #5



Taking Action: Local and Global Initiatives for Change

Cuba provides us with an outstanding example of how a country can take control of their food security through redirecting an industrial food system towards domestic production. Here, on Vancouver Island, and in the cities of British Columbia, local production also holds the promise for a more sustainable, community-based system of food production and distribution. People can become involved in local, urban agriculture through a variety of avenues.

What you can do:

- o Grow food in your yard, on your roof, or on your deck
- o Create school gardens
- o Cultivate a plot at a community garden
- o Select food with the BC Grown, BC Organic and/or Island Fresh labels (See Appendix D for examples)
- o Join a local farmer's food box program (a C.S.A.)
- o Shop at a farmers' market
- o Support international food security projects, such as the one Lifecycles sponsors in Cuba

The Common Harvest Project

The Common Harvest C.S.A. is an innovative project of the non-profit organization Lifecycles, located in Victoria, BC. In this project, four novice organic growers come together yearly to supply produce for weekly boxes, which are delivered to consumers in the local area. The farmers share resources and receive training in farm and business management, while building a supportive network for each other. In addition, the C.S.A. project provides a guaranteed market and the income for up start costs. Consumers benefit from fresh, local produce and a more intimate relationship with the people who grow it. At the beginning of the season, the public can sign up as full members, paying \$460 for 22 boxes over the season, or as half-members, paying \$240 for 11 boxes over the season. Weekly, or bi-weekly organic food boxes contain 8-10 fruits and vegetables, newsletters, farm updates and recipes. For more information on the Common Harvest Project, call Lifecycles at (250) 383-5800.

The Cuban Association of Agriculture and Forestry Technicians

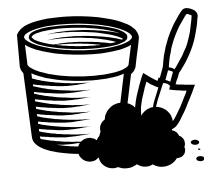
In Havana, Cuba, a dynamic partnership is taking place between Lifecycles and the Cuban Association of Agriculture and Forestry Technicians (ACTAF). With support from the Canadian International Development Agency (CIDA), the two groups are creating lasting practical solutions to the social development challenge of household food access and nutritional health in Havana. This partnership project also addresses environmental challenges associated with urban agriculture and sustainability.

In Havana, the project focuses on the development of a *Centre for the Promotion and Development of Urban Agriculture". This centre will be an important educational site for Cuban citizens, demonstrating agro-ecological growing practices. The site will also be used to build capacity in both agriculture extension agents and producers. Presently the 7-hectare urban farm site is being developed to include areas that demonstrate a wide variety of intensive *organiponic" growing techniques.

A priority of the Centre is the creation of a Women's Centre and Food Preservation Workshop that will offer women classes on nutritional health, food preservation and processing, and small business development. It is a three-year pilot project that ACTAF wishes to replicate for their 10,000 members, in every region of Cuba.

In Canada, Lifecycles and ACTAF's partnership works to raise awareness about environmental and sustainability issues associated with the global food system, while providing support for development of the Vancouver Island Agriculture Strategy.

There is a great deal of support for local food systems in Canada. Yet, for urban food production to flourish, local governments and community groups need to address a variety of challenges. Existing bylaws and policies provide one example of challenges that prevent urban agriculture from taking root in the city. Food production is commonly seen as a low value activity for high value land. We saw this in the case study of Cuba, where, prior to the Special Period, urban gardening was associated with underdevelopment and poverty. In some cities, such as Dares-Salaam and Nairobi, municipal governments continue to fine gardeners and tear down gardens in urban areas.\(^1\) Laws that limit food production in the city need to be revised to include zoning for urban gardens. Governments, businesses, non-profit organizations and citizens have to work together to ensure the success of urban agriculture.



Cultivating Possibility: Picturing Urban Agriculture at Home

Description

Do you know the game Pictionary? Here it is in a slightly modified version. In this activity, classroom assistants will either illustrate, or support group members in illustrating, pictures that demonstrate what can be done on Vancouver Island and in British Columbia to increase the amount of locally grown food in our diets. The groups will work together to guess the idea behind the drawing and learn more about the possibilities for change.

Objective

To apply what students learned from the Cuba example.

To explore ways to increase local food production and purchasing.

Time

15 - 20 minutes

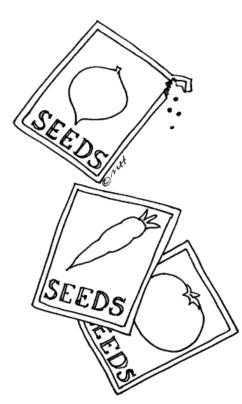
Materials

Classroom assistants, one for each group
Markers and Paper for students to draw pictures on
The "Pictionary" Clue Cards, photocopied and cut into individual cards (see following page)

Let's&!

GRADE 2/3

- I. Introduce activity.
- 2. Divide your class into groups of four-five.
- 3. Ensure group assistants have Pictionary Clue Cards and paper to draw on.
- 4. Facilitators illustrate ideas of how we can increase local food consumption on Vancouver Island and in B.C., while the group guesses the idea behind the drawing.
- 5. Once the group guesses the idea, the facilitator elaborates a bit on it; reiterating what the children saw in the slide show and answering any questions about how the idea (i.e. a farmer's box program) works.



GRADE 4/5/6/7

- l. Introduce activity.
- 2. Divide your class into groups of four-five.
- 3. Ensure the students have paper to draw on and group assistants have the Pictionary Clue Cards.
- 4. Facilitators hand out cards, with ideas for increasing local food consumption on Vancouver Island and in B.C., to one student at a time.
- 5. The student with the clue card draws a picture that illustrate the idea, adding details to the pictures until the group guesses what it is.
- 6. Once the group guesses the idea, the facilitator elaborates a bit on it and answers any questions about how the idea (i.e. a farmer's box program) works.

*This activity can also be done as a whole class, with the teacher, or a student, illustrating the idea at the front of the class and the entire class working together to guess the answer.



"Cultivating Possibility" Clue Cards

Create a School Garden Create a Home Garden

Buy B.C. Grown Foods at the Supermarket Joina Local
Farmer's Food
Box Program

Support
International
Food Projects

Shopata Farmers' Markets

Activity #7

All Grades

Bringing Our Groceries Home

Description

In this activity, you will use a large world map to indicate how the distance our food travels can be shortened through local production. This activity is connected to the mapping exercise in Activity #2.

Objective

To draw links between taking the actions discussed in Activity #6 and increasing local food consumption.

To show students that all the food from the Vancouver Island Grocery Bag can be grown on Vancouver Island.

Time

5 minutes

Materials

Same as activity #2

Let's&!

1. Point at areas on the map where the students stuck the food cut outs from the Vancouver Island food bag. Point out Vancouver Island and explain that all of this food can be grown here.

2. Take the food scattered all over the map and place it on Vancouver Island.

Points to Address with your Class

- All of the food that we looked at earlier can be grown right here on Vancouver Island.
- We can find this food in own gardens, at farmers' markets and even in grocery stores, just look for the 'Island Fresh' label.
- When we use more locally grown food we are doing something that is good for us and good for other people in the world.
- Think of the benefits of locally grown food we discussed in Activity #3.



Activity #8

All Grades

Sharing Our Stories: A Letter Exchange with Cuba

Lifecycles can help your class organize a letter exchange with partner schools in Cuba. Please contact Lifecycles before beginning this activity. Due to the logistics of linking schools in Canada and Cuba, we can only accept a limited number of letters each year.

Description

In this activity, your students will share what they have learned in class with a student in Cuba. They will recount key themes from today's class and express their thoughts about global and local food systems. Lifecycles will arrange for delivery of the letters and replies from students in Cuba.

Objective

To encourage reflection and integration of what students have learned.

To share students' learning with others, while fostering cross-cultural alliances.

Time

20 minutes

Materials

Letter Writing Forms, photocopied for all the students in your class

Let'sCb!

- 1. Contact Lifecycles to set up the letter writing exchange.
- 2. Hand out the letter writing forms to students.
- 3. Introduce the activity.
- 4. Collect completed letters from students.
- 5. Arrange letter pick-up with Lifecycles.

Remain in contact with Lifecycles to arrange drop of Cuban students' replies.



A Letter to Cuba

| | Date: |
|--------------------|-------|
| Dear Cuban Friend, | |
| | |
| | |
| | |
| | |
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| | |
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| | |

Yours truly,

Where in the World... Lesson Five $\bullet\,pg~65$

Grade 4/5

A Letter to Cuba

| Date: | | | | | |
|---|--|--|--|--|--|
| Dear Cuban Friend, | | | | | |
| My name is: | | | | | |
| Here are a few things I would like you to know about me: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Today in class, we learned about growing food locally. I heard about how you grow food in Cuba. Here are my thoughts: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| And my questions for you: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| I look forward to hearing from you soon! | | | | | |
| Yours truly, | | | | | |
| | | | | | |
| | | | | | |

Grade 2/3

A Letter to Cuba

| Da | te: | | | | |
|---|----------|--|--|--|--|
| Dear Cuban Friend, | | | | | |
| My name is: | ·• | | | | |
| I am years old. | | | | | |
| I go to: | School. | | | | |
| Today in class, we learned about growing food locally. I heard about how you grow food in Cuba. | | | | | |
| I learned that: | | | | | |
| | | | | | |
| | | | | | |
| I have some questions for you: | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| I look forward to hearing from you soor | n! | | | | |
| Yours truly | / | | | | |
| | | | | | |

Supplementary Activity #5

Grades 4-7

Urban Agriculture Jeopardy

Description

In this activity, your class will play a game of Jeopardy in which they will explore the basic issues of food security and urban agriculture.

Objective

To gain a sense of how much your class has learned about the issues of food security and urban agriculture.

To review some basic facts and stimulate further thinking about food security and urban agriculture.

Time

15-20 minutes

Materials

Photocopied overhead of the Jeopardy game Overhead projector and screen Paper to cover the "answer" squares

Let's&!

- 1. Divide students into teams of four or five.
- 2. In your most charismatic talk show host voice, introduce the jeopardy game and rules:
 - a. The right to choose the category is rotated around the class clockwise.
 - b. Once a team chooses a category and the "answer" square is revealed, all teams have equal right to guess the "question."
 - c. When a team is ready to guess the "question", they put their hands in the air and shout "Jeopardy!"
 - d. The first team to guess the "question" correctly wins the points.
 - e. The team with the greatest number of points at the end of the game wins.
- 3. In order to determine which team goes first, give a sample "answer". Whichever team first guesses the "question" correctly, gains the right to choose the first category.
- 4. When game is over, answer questions about the facts that were raised during the game.



URBAN AGRICULTURE JEOPARDY

| ₽ | Islands Apart | BlomingCities | How Food Travels | Why I Should Care | Taking Action |
|-----|---|--|---|---|--|
| 100 | An island which produces only 10% of it's own food | *Home"for 75% of the world's population | Something food does a lot of to get to us when it is grown far away | A component of the environment that is cleaned by plants breathing in and out | An activity you can do at home that is fun, healthy and gives you something to eat at the end of the day |
| 200 | An island country that grows the majority of its own produce | 6000 tons of this is imported daily to feed the average "mega-city" | A polluting non- renewable resource used when cars, trucks and airplanes transport food | A smelly place that is often filled with unnecessary packaging from imported food products | A place to grow vegetables when you don't have your own garden |
| 300 | Dangerous chemicals banned in Cuban gardens, that are often used to grow the food we import | A place where you can buy food from a variety of local farmers | An important quality food loses a lot of while being transported great distances from the field to our plates | An illness that has been linked to the pesticides used in industrial farming | A label that indicates a food product is made in B.C. |
| 400 | A large public lawn in Victoria that would be a great place for growing food | The number of months in a year we can grow food in Victoria | The number of km the average piece of food travels to reach our plates | Tiny endangered creatures that are given a new place to live when urban gardens are created | A sweet green fruit that can be grown in Victoria though it is usually imported from New Zealand |

Urban Agriculture Jeopardy Answers

1. Island's Apart

- a. 100: What is Vancouver Island?
- b. 200: What is Cuba?
- c. 300: What are pesticides?
- d. 400: What is the lawn of the B.C. Legislature?

2. Blooming Cities

- a. 100: What is a city?
- b. 200: What is food?
- c. 300: What is a farmers' market?
- d. 400: What is 12 months?

3. How Food Travels

- a. 100: What is traveling?
- b. 200: What are fossil fuels?
- c. 300: What is taste or nutritional value?
- d. 400: What is 2000km?

4. Why I Should Care

- a. 100: What is air?
- b. 200: What is a landfill?
- c. 300: What is cancer?
- d. 400: What is a blue orchard mason bee?

5. Taking Action

- a. 100: What is gardening?
- b. 200: What is a community garden, a roof, or a deck?
- c. 300: What is the Buy BC, BC Organic or Island Fresh label?
- d. 400: What is a kiwi fruit?

Supplementary Activity #6

All Grades

An Urban Agriculture Tour

Description

Now's the time to experience urban agriculture first hand. In this activity, you will take your class to a local urban farm where a farmer will share the joys and challenges of growing for the local market.

Objective

To meet local farmers.

To have a personal experience with urban farming.

Time

2-3 hours for transportation and tour

Materials

Note paper and pens for writing down observations if desired

Let's&b!

- l. Contact a local urban agriculturalist to set up a visit. Lifecycles can supply you with a list of interested farmers if needed.
- 2. With your class, brainstorm a list of questions they may want to ask the farmer during the visit. (See below for ideas.)
- 3. Visit the site.
- 4. After your visit, have your class create thank you letters or drawings for the urban agriculturalist you visited. Be sure the students identify what they learned in their letter or drawing.

Some questions to ask a farmer:

- 1. How long have you been farming?
- 2. Where did you learn how to farm?
- 3. How much of the food you eat comes from your garden?
- 4. What do you do with the surplus food?
- 5. What do you like best about urban farming?
- 6. What are the biggest challenges you face as a farmer?



Supplementary Activity #7

Grades 4-7

Building a Classroom Farm Model

Description

In this activity, your students will create a scale model of the ideal urban farm. They can include many of the components discussed in the lessons up until this point.

Objective

To consider the components of an urban farm.

To consider how the various components of an urban farm work together.

Time

4-10 hours

Materials

Large piece of wood to form the base of the model Extensive craft supplies to create model components Glue

Let's&b!

- l. Considering what your class learned from the Cuba presentation and urban agriculture out-trip, brainstorm a list of the components of an urban farm.
- 2. Find materials that can be used to represent these components in your model. i.e. toothpicks for trellises.
- 3. Divide up tasks amongst small groups (i.e. One can make the greenhouse, another the trees).
- 4. Bring together the various components and, with the whole class, put together your classroom urban farm model.

Same Components of an Urban Farm:

- 1. Water source
- 2. Raised and ground level garden beds
- 3. Greenhouse
- 4. Composting station
- 5. Tool shed
- 6. Ornamental and food crops
- 7. Trees for shade and shelter
- 8. Animals chickens, bees etc.
- 9. Bee boxes to attract native pollinators



Supplementary Activity #8

Grades 4-7

Creating a "City Grown" Logo

Description

Keeping in mind the logos used to identify BC Grown, Island Fresh and BC Certified Organic products, create an eye-catching logo to identify Urban Agriculture products in the grocery store.

Objective

To reflect on what has been learned about the benefits of urban agriculture. To consider what is required to market a successful product.

Time

30 minutes

Materials

Paper

Markers

Glue

Other craft supplies

Let's&:

- I. Acquaint your class with the BC Grown, Island Fresh and BC Certified Organic logos. Use the examples provided in Appendix D, or bring in products with the logos on the label.
- 2. With your class, brainstorm the important components of a logo. (See list below for ideas.)
- 3. Hand out craft materials.
- 4. Create the logos.
- 5. Display the logos in the classroom.

Logo Considerations

- l. Originality: There are thousands of logos out there. Is yours original?
- 2. Simplicity: People need to be able to identify your logo at a glance. Is it easy to remember?
- 3. Word or Image: Is your logo a word or an image or a combination of both?
- 4. Size: Can your logo be reduced in size to fit on a tomato and still be visibly clear?
- 5. Colour: Colours are expensive to print. Keeping to one or two colours is best!



Appendix A - Glossary

Air pollution: A condition of the air, arising from the presence of contaminants (such as CO2), that endangers the health and well-being of people, animals and plants.

Anthropocentric: Any purely human-oriented perspective of the environment, usually used to emphasize the importance of humans over all other living things. For example, assessing a land area only in terms of its economic value is an anthropocentric perspective.

Arable: Land that may be used for farming without need for alteration (clearing, detoxifying etc.).

Biodiversity: The variability among living organisms on the earth, including the variability within and between species and within and between ecosystems.

Blockade: The isolation of a nation, area, city, or harbor by hostile forces or policy, in order to prevent the entrance and exit of traffic and commerce.

Cash crop: A crop grown for sale, instead of use by the people who grow it.

Community Garden: A piece of land held in common, where people share basic resources –water, sunlight, soil, inspiration – in order to grow food.

Community Shared Agriculture: CSA; a marketing arrangement in which a farmer enters into pre-arranged agreement with a group of local consumers. Each consumer purchases a "share" of the harvest at the beginning of the season, which covers the costs of farming and provides a fair wage for the farmer. In return, the shareholder receives a weekly box of produce throughout the growing season.

Comparative Advantage: The idea that distinct regions or countries have economic, social or environmental advantages that should be put to use to produce goods or services at a lower cost than other countries. (i.e. Mexico's loose labor and environmental standards would be considered comparative advantages for that country.)

Conventional or Industrial Agriculture: Food production, usually large scale, which depends on advanced technology and chemical inputs for crop success.

Cultivate: To improve something (i.e. the land or our minds) by providing inputs and energy.



Endangered: The state of a species that is at risk of imminent extinction throughout all or a significant portion of its range.

Entrepreneurship: The action of an individual who starts her or his own business.

Environment: All the components of the Earth, including air, land, and water, organic and inorganic matter and living organisms, and the interacting systems that include all of these components.

Export: To carry or send something (i.e. a commodity) to some other place.

Extension Services: The outreach arm of an institution that does research and provides educational programs on farming.

Extinct: The state of a species that no longer exists anywhere.

Farmer's Market: The place where a number of local farmers and vendors come together to sell a variety of goods including fruits, vegetables, herbs, baked goods, preserves, honey, fresh flowers and crafts. There are over 55 farmers markets in British Columbia.

Fertilizer: Organic or inorganic nutrients that are added to the soil to help the growth of crops. Organic agriculture emphasizes the use of organic fertilizers such as compost and manure, whereas industrial or conventional agriculture emphasizes the use of laboratory produced chemical fertilizers.

Food Security: Assurance that all people at all times have access to nutritious, safe, personally-acceptable and culturally-appropriate foods, produced in ways that are environmentally sound and socially just.

Food System: The group of interrelated elements involved in growing, transporting, processing, marketing and consuming food.

Fossil fuels: Oil, gas, coal, and other fuels that were formed under the Earth's surface from the fossilized remains of plants and tiny animals that lived millions of years ago. A non-renewable resource.

Genetic Engineering: A set of techniques for isolating, modifying, multiplying and recombining genes from different organisms.

Globalization: The movement in our world towards an interconnected business environment in which goods move freely between countries, regardless of social, economic or environmental cost.



Habitat: The area or environment where an organism or animal normally lives.

Import: To bring something (i.e. commodities) from a foreign or external source.

International Solidarity: Supporting people and projects in countries outside of Canada in the spirit of justice and the common good.

Locally Grown: Food grown close to the place of consumption.

Monoculture: Cultivation of a single crop in a field year after year with no crop rotation.

Monopoly: A situation in which a single company owns all or nearly all of the market for a given type of product or service.

Non-renewable resources: Natural resources that cannot be replaced, regenerated, or brought back to their original state once they have been extracted (i.e. fossil fuels).

Oligopoly: A situation in which only a few companies own all or nearly all of the market for a given type of product or service.

Organic Agriculture: Food production that avoids the use of chemical fertilizers, chemical pesticides, chemical growth regulators/hormones and antibiotics.

Organic methods minimize the impact on the environment, focusing on maintaining a healthy soil and a balanced farm ecosystem that is environmentally sustainable.

Pesticide: A substance used to kill unwanted plants and animals. Includes herbicides, insecticides, and fungicides.

Pesticide residue: Refers to a pesticide that remains in food, soil, and water after application. Many of the 5 000 different chemical pesticides are toxic substances that penetrate fruits and vegetables and cannot be washed off.

Policy: A plan or course of action of a government or other organization, intended to determine decisions, actions, and other matters.

Pollution: The release of substances or energy into the environment that results in such deleterious effects as to harm living beings, including humans, animals and the environment.

Renewable resource: A natural resource that is capable of regeneration, if managed in a sustainable fashion.



Soil erosion: The detachment and movement of soil by the action of wind (wind erosion) and moving water (water erosion).

Stewardship: An individual's responsibility to exercise care over the things (i.e. the environment) entrusted to him or her.

Sustainable: Use of something, such as a resource, in a way that its viability, health and vitality is maintained for future generations of people, animals and other beings.

Top Soil: The richest and uppermost layer of soil, ranging in depth from 7 to 25 cm.

Transgenic Organisms: Life forms that contain genes from different species.

Urban: An 'urban place" or 'urban area," as defined by Statistics Canada, has a population of at least 1 000 concentrated within a continuously built-up area, at a density of at least 400 per square km.

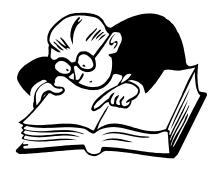
Urban Agriculture: Growing food within the city.

Urbanization: The growth of a city into rural or wilderness areas.

Value-Added: Processing done to increase the sale value of a product. For example, jam would be considered a value-added product.

Sources:

Environment Canada's Glossary of Selected Terms from The State of Canada's Environment 1996 Report http://www.dictionary.com/www.investorwords.com/http://www2.kenyon.edu/projects/farmschool/addins/glossary.htm



Appendix B - Print Resources

Journals and Educational Resources:

The Ram's Horn: A monthly journal of food systems analysis, published every month by Brewster and Cathleen Kneen. The Ram's Horn is a unique and valuable source of information and analysis of the global food system.

S6, C27, RR#1 Sorrento BC V0E 2W0

email: ramshorn@ramshorn.bc.ca phone/fax: 250-675-4866

Green Teacher: A magazine by and for educators to enhance environmental and global education at all grade levels. Fifty pages of ideas and activities, four times a year.

95 Robert Street Toronto, Ontario M5S 2K5 Email: greentea@web.net Phone: (416) 960-1244 Fax: (416) 925-3474

Email: macearth@mcmaster.ca

The Supermarket Tour: A handbook for running The Supermarket Tour; an exercise that looks for the lessons behind every product on the supermarket shelf. Stella Lee et al.

OPIRG McMaster, 2002.

Food First Curriculum: An integrated curriculum for Grade 6: A resource of extensive curriculum on food systems and hunger.

Laurie Rubin Institute for Food and Development Policy Oakland, CA. 1984. foodfirst@foodfirst.org



Books:

For Hunger Proof Cities: Sustainable Urban Food Systems Mustafa Koc et al., eds. IDRC Press. Ottawa, ON. 1999.

From Land to Mouth: Understanding the Food System

Brewster Kneen

NC Press. Toronto, ON. 1989.

On Good Land: The Autobiography of an Urban Farm Michael Abelman Chronicle Books. San Francisco, Ca. 1998.

A Patch of Eden: America's Inner City Gardens H. Patricia Hynes Chelsea Green. Vermont, USA 1996.

A Place to Grow: Voices and Images of Urban Gardeners David Hassler and Lynn Gregor, eds. The Pilgrim Press. USA 1999.

Real Food for Change: Bringing Nature, Health, Joy and Justice to the Table Wayne Roberts, Lori Stahlbrand, Rod MacRae Random House Canada. Toronto, ON. 1999.

Sustainable Agriculture and Resistance: Transforming Food Production in Cuba Fernando Funes et al, eds.
Food First Books. Oakland, Ca. 2002.

Urban Permaculture: A Practical Handbook for Sustainable Living David Watkins
Permanent Press. Hampshire, Eng. 1993.



Appendix C - Web Resources

Local food Resources:

http://www.freshfromtheisland.com/: The Island Farmers' Alliance site. The IFA is an association of farmers on Vancouver Island and surrounding islands whose mission is to ensure the sustainability and growth of Island agriculture by promoting local foods and farmers.

http://www.certifiedorganic.bc.ca: The Certified Organic Association of British Columbia

http://www.certifiedorganic.bc.ca/CA/iopa_list.asp: Island Organic Producers' Association

http://www.cog.ca/siopa.htm: South Island Organic Producers' Association

http://www.agaware.bc.ca: An industry-run agriculture awareness program which educates the public about B.C.'s agriculture industry.

Urban Agriculture and Food Security Resources:

http://www.cityfarmer.org: A Vancouver-based NGO that acts as a clearinghouse for information on Urban Agriculture from all over the world.

http://www.foodfirst.org/: The Institute for Food and Development Policy is a member supported, nonprofit 'peoples' think tank and education-for-action center.

http://www.foodsecurity.org/: The CFSC is a non-profit, membership-based US coalition of over 600 organizations and individuals that focus on food and agriculture issues.

http://www.localfood.org.uk/: UK's primary internet resource for local food issues

http://www.ruaf.org/: The Netherlands-based Resource Centre on Urban Agriculture and Forestry.

http://www.agobservatory.org/: A Global Resource Centre for Food and Agriculture Policy.



http://www.idrc.ca/cfp/index_e.html: Cities feeding people. Information about the urban agriculture program at Canada's International Development Research Centre.

Educational Resources (for Teachers and Students):

http://www.rodaleinstitute.org/kids/home.html: Rodale Institute Kid's Page. Information and activities on sustainable farming and related practices.

http://www.kidsregen.org/: More information and activities on sustainable farming and related practices.

http://www.oxfam.ca/campaigns/worldFoodDay2.htm: Oxfam Canada's World Food Day Curriculum: The business of food. A great resource for older grades.

http://www.yorku.ca/faculty/academic/dbarndt/: Tomasita the Tomato Popular Education Project

http://www.cityfarmer.org/subchildren.html: Lots of articles on children and youth and urban agriculture.

http://www.nceet.snre.umich.edu/ee-linkintroduction.html: Your link to environmental education resources on the internet.



Appendix D - Labels to Look Out For!



The Buy B.C. label lets you know that the product is grown or made in British Columbia. More than 4,500 different food products are identified with the Buy BC logo.



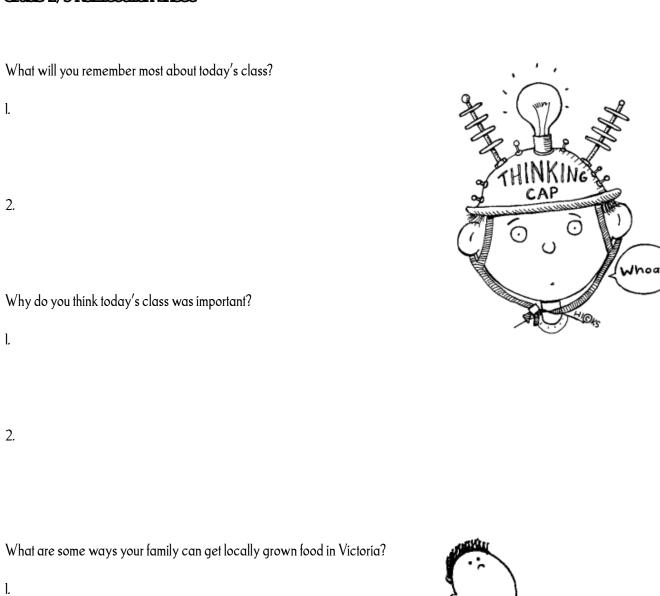
The British Columbia Certified Organic label lets you know that the food is grown organically (without chemical fertilizers, pesticides or herbicides) within B.C.



The Fresh From the Island label lets you know that the food is grown or made right here on Vancouver Island

Food for the City

Grade 2/3 Reflection Sheet







Food for the City

Grade 4/5 Reflection Sheet



What will you remeber most about today's class?

- l,
- 2.
- 3.

Why do you think today's class was important?

- l,
- 2.
- 3.



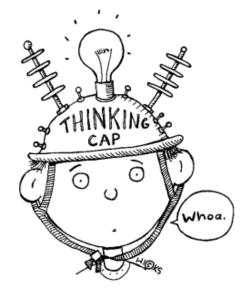
What are some ways your family can get locally grown food in Victoria?

- l,
- 2.
- 3.

Food for the City

Grade 6/7 Reflection Sheet

What will you remember most about today's class? What would you like to know more about?



Why do you think today's class was important?

What are some ways your family can get locally grown food, and less imported food, in your diet?



Where in the World Resource Kit Evaluation



We at LifeCycles appreciate you taking the time to fill out this evaluation of the Where in the World..." Resource Kit. We depend on your comments to help improve the resource kit for everyone. Thank you!

| Name: | | | | | | | School | l/Org | janizatic | n: | | | |
|----------|--------|----------|---------|------------|------|----------------|-----------|-------|-----------|--------|-------|---|------------------------------|
| | | | | | | | | | | | | | |
| I. My le | vel of | satisfac | tion wi | ith the re | sour | ce kit is: | | | | | | | ce kit pro- our students? |
| Unhappy | 1 | 2 | 3 | 4 | 5 | Very Impressed | Notreally | 1 | 2 | 3 | 4 | 5 | Yes, of course |
| | · | | | | · | ou consider to | | | | nneces | sary? | | |

Any additional comments? Please use the rest of this sheet to share your thoughts.

Please complete and mail to: Lifecycles, 527 Michigan St. Victoria, BC V8V ISI