



National Farmers Union Youth Curriculum

Grades 3-5

Contents:

Lesson 1: Agriculture in Your Life ~ lesson plan with two hand-outs, *30 minutes*

Lesson 2: Food Detectives ~ lesson plan with three hand-outs, *2 hours*

Lesson 3*: Buy Local ~ lesson plan with four hand-outs, *2 hours*

Lesson 4*: Buy Co-op ~ lesson plan with two hand-outs, *1 hour*

Lesson 5: Plant a Garden ~ lesson plan, gardening activity and song, *2 hours*

Optional Activities

** Lesson contains a cooperative education component.*

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Lesson Plan 1: Agriculture in Your Life

Unit Objective: Identify the original agricultural sources of basic U.S.-produced products.

Grades: 3-5

Length: 30 minutes

Materials Needed: Activity Sheets A and B

Background:

Agriculture plays a major role in our lives: from what we wear, to what we use in our classes and even to what we do after school. We may not always think of agricultural products as the physical source of the items or things we use everyday. However, most daily essentials can be traced back to one or more agricultural sources.

Farming is what many think of when they hear the word “agriculture.” This is the actual production or growing of raw commodities. People who raise and harvest crops and livestock for consumption or purchase are typically categorized as farmers and ranchers. It doesn’t stop there. Production agriculture also includes a variety of specialties, such as fish, timber, fur-bearing animals, trees, shrubs, flowers, herbs and much more. Did you know that in Farmers Union, we have members all across the country that produce almost every kind of agricultural product that can be produced in the United States?

Most of the products we use everyday come from farmers like those who are part of Farmers Union. The sheets we sleep on and the pajamas we wear are made from cotton, just like Q-tips for your ears. The feathers in pillows may come from chickens or ducks. The cereal and milk we eat for breakfast; the pencils, crayons and paper that we use at school; and the baseballs, bats and gloves we use after school all originate from raw agricultural products. We know our food comes from agriculture, but we are surrounded by and reliant upon many agricultural products the whole day through. Thank goodness for farmers!

Teaching Strategy:

1. Discuss background information, and hand out Activity Sheet A. Students should match the product with its agricultural source.

Answer Key: Activity Sheet A

Timber – paper, pencils, potpourri, houses

Dairy cow – cheese, ice cream, yogurt

Cotton – blue jeans, paper, shirts

Flower – perfume, potpourri

Wheat – spaghetti, tortillas, cereal

2. Discuss with students other products that come from agriculture.
3. Hand out Activity Sheet B. Discuss the vocabulary words and the bold-faced heading words listed to ensure that students understand them.
4. Review alphabetizing. Have students write the vocabulary words in alphabetic order on the lines under each heading. After students complete the exercise, they can complete the Word Find puzzle.

Answer Key: Activity Sheet B

Crops – corn, cotton, rice, soybean, wheat

Livestock – beef cattle, dairy cattle, poultry, sheep, swine

Horticulture – apples, flowers, trees, turf grass, vegetables

Dairy – butter, cheese, ice cream, sour cream, yogurt

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Activities taken from: Ag in the Classroom, USDA ~ www.agclassroom.org

Agriculture in Your Life

Directions: Match the products with their sources. Draw lines to connect the product on the right with the picture, or pictures, of the product's agricultural source on the left.



Timber



Dairy Cow



Cotton



Flower



Wheat

Cheese

Blue Jeans

Paper

Spaghetti

Perfume

Ice cream

Pencils

Tortillas

Shirts

Potpourri

Houses

Yogurt

Cereal

Agriculture in Your Life

Directions: Place the vocabulary words in alphabetical order under the appropriate topic.

Crops

Livestock

Horticulture

Dairy

Vocabulary Words

- | | | | |
|-------------|--------------|-----------|--------|
| beef cattle | corn | soybeans | apples |
| cotton | vegetables | ice cream | butter |
| sour cream | cheese | poultry | swine |
| sheep | dairy cattle | flowers | rice |
| turf grass | wheat | yogurt | trees |

Find and circle the words in the puzzle.

WORD FIND

butter
cheese
corn
cotton
rice

sheep
swine
trees
vegetables
wheat

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C O R N A C T B O E G
O Q T S N S A U M S S
T R E E S H M T R E W
T O A W H E A T W E I
O C R T L E O E F H N
N S F B M P J R I C E
V E G E T A B L E S O
    
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Lesson Plan 2: Food Detectives

- Unit Objective:** Learn about “food miles,” the distance our food goes from farm to table, and how to read food labels for state and country of origin.
- Grades:** 3-5
- Length:** 2 hours: 15 minutes classroom instruction (or in-store initiation), 60 minutes at local grocery store, and 45 minutes to complete worksheets and wrap-up
- Materials Needed:** Activity Sheets C, D and E; a U.S. map and a world map or globe
- Preparation Needed:** Call the grocery store manager a few days in advance to set a time to come in and browse the aisles with the youth. Let the manager know you will be conducting a scavenger hunt using food items and ask if the individuals responsible for ordering the fruits, vegetables and meat can be available for questions from the youth.

Background:

“Food miles” refer to the distance a food item travels from the farm to your home. The food miles for items you buy in the grocery store tend to be 27 times higher than the food miles for goods bought from local sources.

In the United States, the average grocery store’s produce travels nearly 1,500 miles between the farm where it was grown and your refrigerator. That’s about the distance between New York and Dallas, Texas.

About 40% of our fruit is produced in foreign countries. Even though most Americans live about 60 miles from an apple orchard, the apples you typically buy at the grocery store travel 1,726 miles between the orchard and your house. That’s farther than driving from Portland, Maine, to Miami, Florida!

So how does our food travel from farm field to grocery store? It’s trucked across the country, hauled in freighter ships over oceans, and flown around the world. Just think, your lunch may have traveled by boat, train, plane and truck just to get to you!

Teaching Strategy:

1. Introduce the concept of “food miles” to the youth with an overview of the background information above, using the maps to point out areas described in the background information.
2. Talk to students about food labels, bin labels and how they can find where foods are produced and processed. Mention that some foods may not have origin labels. In the United States, origin labeling has been voluntary, but Farmers Union is working to make sure country-of-origin labeling becomes mandatory so that all foods will be labeled to let us know where it is grown, raised and processed.
3. Visit the local grocery store and explain that, as food detectives, their mission today is to find out where various foods come from. Have them take their worksheets with them and give them time to browse the store and complete Activity Sheet C, the grocery store scavenger hunt.
4. Return to the classroom and discuss the findings of the scavenger hunt. Have them fill out Activity Sheet D as a group project. The students may come back with several responses from the various brands and types of foods.
5. Have the youth complete Activity Sheet E, if time allows.

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Sources: <http://www.sustainabletable.org/>

Food Detectives

Directions: Locate the following items in the grocery store and read the label. Find out where the food comes from or originates. If you cannot find a label that identifies where the product comes from, ask the store manager, produce manager or butcher.

1. Ketchup
2. Hamburger
3. Bread
4. Frozen fish
5. Carrots
6. Grapes
7. Pork chops
8. Milk
9. Eggs
10. Apples
11. Chicken
12. Lettuce
13. Oranges
14. Tomatoes



What are your 3 favorite foods? Where do they come from?

- 1.
- 2.
- 3.

Ask the produce manager how he/she determines what types of foods to sell at the store. Also, ask if they give any special consideration to bringing in locally-grown fruits and vegetables. What did she or he say?

Food Detectives ~ Group Analysis

1. After visiting the store, mark the two items that traveled the furthest distance to arrive at your grocery store. Mark those two items on the map that your teacher has provided.
2. After everyone has marked their two items, what 2 items traveled the furthest distance?
3. Is this a product that can be grown in your area? Yes or No?
4. Including everyone's work, what items traveled the least distance to the grocery store? List 3-4 items.
5. Could you find labels on everything?
6. Do you think mandatory country-of-origin food labeling is important? Why?
7. What did you observe and learn while at the grocery store?
8. What can you do to help your family buy local?

“Buy Local” Word Clues

Directions: Unscramble the words to complete the following sentences related to buying local foods.

_____, locally-produced food is more nutritious. S H E F R

Local food preserves the _____. M N T E N I R O V E N

Buying local food reduces wasteful _____. G I N A K G A C P

The U.S. has lost 4.7 million _____ since 1935. A M R F S

The average meal travels 1,500 _____ before it reaches your plate. E I L M S

____ T A E _____ L A Y L S N E O A S means eating fruits and vegetables only during the time of the year that they are available locally.

A huge volume of _____ L O I is used to transport food that can be purchased locally.

Buy food directly from your local farmer at a farm stand or a _____ A M F R R E S _____ K R E A T M.

What other words can you come up with that describe “buy local?”

Lesson Plan 3: Buy Local!

- Unit Objective:** Learn about the process food goes through to get to our kitchen table and how to make the best food choices for our health, community, environment and local economy.
- Grades:** 3-8
- Length:** 2 hours: 15 minutes classroom instruction, 60 minutes for a visit to a local farmers market, U-Pick Farm or for an in-class visit from a local farmer, 45 minutes follow-up classroom instruction and two activity sheets
- Materials Needed:** Youth Leader Overview, Activity Sheets G, I, and J and Hand-Outs F and H
- Preparation Needed:** Arrange a classroom visit from a farmer, or a field trip to a farmer's market or CSA.
- Background:**

There are two food systems at work in the United States: one global and one local. Under the ever-growing global food system, the average American's meal travels an average 1,500 miles from farm to plate.

Under the global food system, a farmer receives only a fraction – about 20 cents – for every dollar spent on food. The rest of the money pays for labor, packaging, transportation, retail and other costs associated with food production and distribution. And, the majority of the food processing is in the hands of a few companies, which means farmers have less ability to capture their fair share of the food dollar.

On the flip side, in a local food system, farmers retain 80 percent of the food dollar when they are part of farmer's markets, CSAs (Community Supported Agriculture), **cooperatives** and direct marketing ventures. In addition, every dollar spent on locally grown food puts at least three dollars into the local economy. In the local food system, food travels fewer miles, which means it's fresher and better for the environment.

Teaching Strategy:

- Opening questions could include the following:
 - Where does your family get its fruits, vegetables and meat?
 - What other choices do you have for buying your food?
 - Do you think you should care where your food comes from?
- Introduce the topic of this lesson plan to the students, including the information you gained from the background.
- Distribute the "Global Food System vs. Local Food System" hand-out. Review each cycle and discuss the pros and cons of both styles of systems.
 - Which looks like the best system and why?
 - How many steps does each food system take?
 - Why might the Global Food System be useful? Why might it be inefficient?
 - Why might the Local Food System make more sense?
- Real world encounter:
 - Have a farmer who sells directly to consumers through a CSA or Farmer's Market visit the class to explain the work he/she does and his/her thoughts on the advantages of selling directly to consumers.
 - Or, take a field trip to a Farmer's Market or U-Pick farm. Visit with farmers there about their operations. Allow the children time to pick produce.
- After the visit or field trip, have the children complete the Activity Sheet H as a class or in groups.
- Review with students the reasons why buying locally makes sense as listed on the "Buy Local" Hand-Out G. Encourage them to take this hand-out home to share with their parents or guardians.
- Have the class complete Activity Sheet I.

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Sources: <http://www.oxfamamerica.org>

"Eat Fresh, Buy Local" ~ National Farmers Union Curriculum



Local food is available around the country and most likely there are several outlets close to you at the following locations.

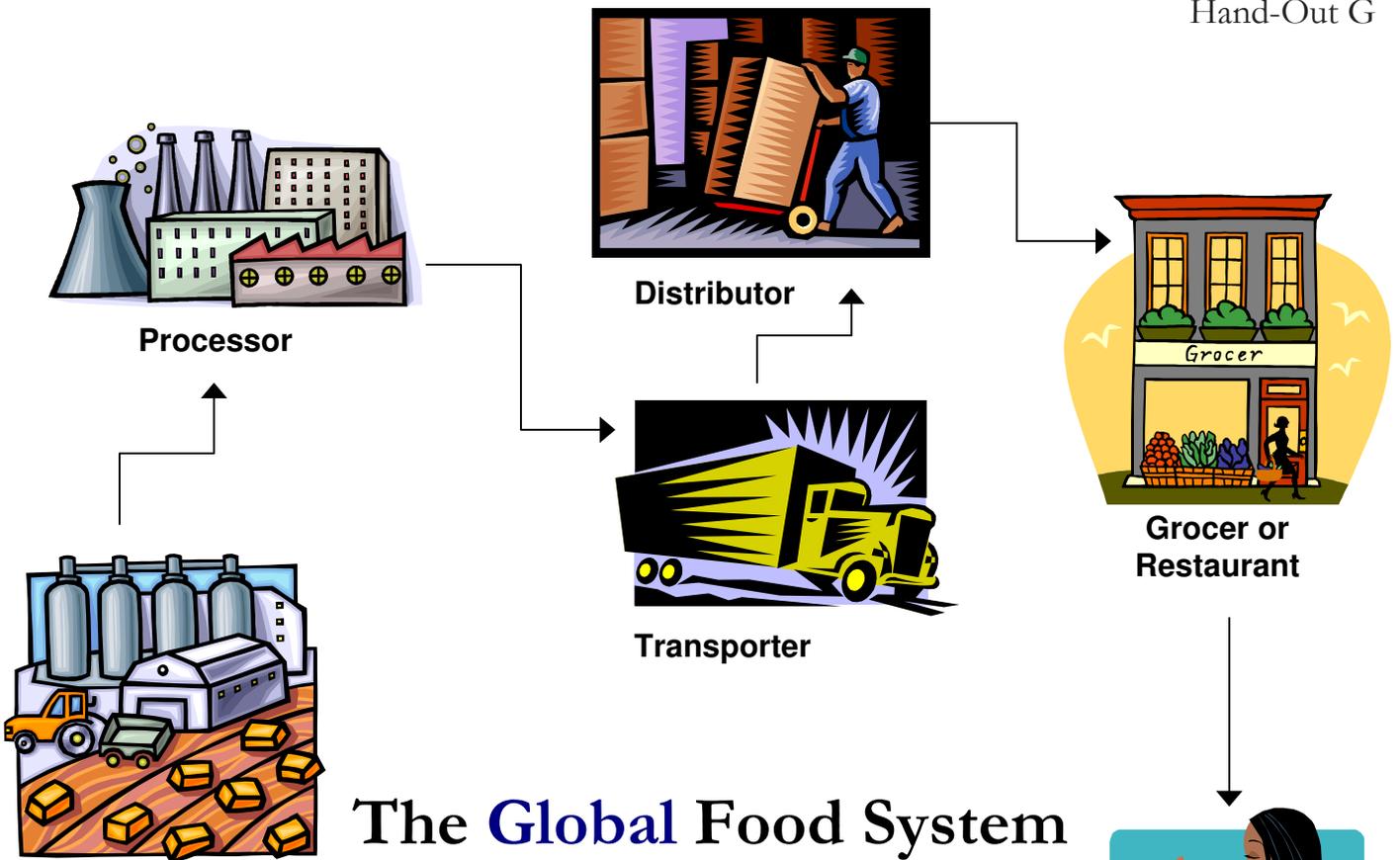
Farmer Cooperatives – Farm and food co-ops are member-owned businesses. They are typically owned by members who pay fees to use co-op services. But, you can generally buy from a co-op even if you aren't a member. Farm cooperatives often allow farmers to share the marketing and processing costs, which allow them to retain a larger part of the food dollar. Visit <http://www.e-cooperatives.com/>, National Farmers Union's online portal to directly locate and buy quality food products, goods and services from hundreds of U.S. agricultural producers and their cooperatives.

Farmer's Markets – A Farmer's Market is a place where local farmers come together in one location to sell their produce, flowers, bread, cheese, honey and other homemade products. Check out USDA's web site, www.ams.usda.gov/farmersmarkets/map.htm, or www.localharvest.org to find farmer's markets near you.

Community-Supported Agriculture (CSA) – CSA is an arrangement or partnership made between a group of consumers or individuals and a local farm. Consumers may purchase seasonal "shares" at CSA farms, which entitle them to weekly food allowances. Shareholders visit the farm or another pick-up location at a scheduled time each week to get their food. Or, some CSAs make home deliveries. Visit FoodRoutes.org's "Find Good Food" Guide: <http://www.foodroutes.org/localfood> or <http://www.wilson.edu/csasearch/search.asp> to find out more about CSAs and where you can find them in your area.

Direct marketing – Some farmers sell produce directly from a farm stand or on-farm market or provide you the opportunity to come by to pick your own. For local "U-Picks" and farm stands, visit FoodRoutes.org's "Find Good Food" Guide: <http://www.foodroutes.org/localfood>.

Grocery stores and restaurants – Some grocery stores and restaurants are embracing the benefits of buying local foods. Encourage your local stores to supply food from local farmers, if they don't already.



The Global Food System

VS.

The Local Food System

U-Pick, Direct Marketing, Co-op



Buy Local Foods!



TIP: When looking for fresh, healthy foods, ask yourself, “Where did this food come from?” If you can’t figure out how it got from the farm to your plate, it probably picked up a lot of sugar, salt, fat and chemicals along the way.



“Eat Fresh, Buy Local”
 NFU Curriculum
 Source:
www.sustainabletable.org

Buying locally means buying food that is produced, grown, or raised as close to your home as possible. In the United States, the ingredients for an average meal travel 1,500 miles from the farm to your plate! As a result, food is less fresh, contains fewer nutrients, and requires resource-intensive transportation and packaging. Here are some reasons to buy locally:

- **Fresh, locally-produced food is more nutritious.** Foods transported short distances and kept on shelves for only a short time contain more nutrients and fewer preservatives than foods that travel long distances.
- **Local food may protect your family’s health.** Industrially-produced foods are typically grown with pesticides, chemical fertilizers, antibiotics, and growth hormones. To extend shelf-life, certain foods are also subject to irradiation, a process that may reduce the nutritional value of foods and have uncertain effects on human health. Local foods typically undergo minimal processing and are usually produced without these substances.
- **Local farms help preserve the environment.** Small, local farms are generally more environmentally-friendly than large-scale industrial agriculture operations. Small family farms tend to utilize sustainable farming techniques, often raising natural or organic products without pesticides and other chemicals.
- **Reduced waste in packaging.** Foods produced locally require much less packaging than foods shipped long distances. Buying locally eliminates food packaging from the waste stream, thus conserving resources and reducing the need to build new landfills.
- **Reduced reliance on oil.** A large volume of oil is used to transport food that could be purchased locally. Buying locally decreases transportation and helps America reduce its reliance on foreign oil supplies. Increased usage of fossil fuels in transporting foreign and industrial foods long distances mean increased air pollutants than from local foods.
- **Buying locally helps family farmers.** According to the USDA, the United States has lost 4.7 million farms since 1935. Family farmers are going out of business at a drastic rate, causing rural communities to deteriorate. Local food buying supports family farmers and helps to save this important element of American life.
- **Buying locally supports the local economy.** Money spent in the community stays in the community longer, benefiting local retailers and residents instead of huge industrial agriculture corporations.
- **Preserved local farmland.** The U.S. loses two acres of farmland a minute as cities and suburbs spread and take over the land. Most farms these days are “edge farms” located on the outskirts of urban and suburban population centers. This means they’re in danger of being bought out by developers as they struggle to stay in business. On a positive note, this makes buying local easier for city-dwellers.
- **Local food tastes better!** More chefs and food lovers are discovering that local, fresh foods simply taste better than their industrial counterparts, and are working to preserve local varieties and cook foods that are in-season. Local, naturally raised and fed animal products are noticeably more flavorful. Try them, and you’ll notice the difference!



Why Should I Care Where My Food Comes From?

1. Why should you care where your food comes from?
2. What is local food?
3. What are some of the reasons we should use a local food system when available?
4. What is a Farmers Market? What is a CSA?
5. How does buying locally help your community?
6. How is buying locally good for the environment?
7. Does the quality and taste of food differ when using the “Global Food System” as compared to the “Local Food System”? If so, please explain the differences.
8. What can you and your family do to make sure you buy local when possible?
10. After visiting a Farmers Market or with a farmer, plan a dinner menu based on fruits, produce and meats available to you today.

Think Globally, Eat Locally

Directions: First, find and circle ALL of the vocabulary words in the word puzzle below.

Place a checkmark to the **left** of the words as you find them in the puzzle.

Next, draw a smiley face to the **right** of each word in the list that is a common trait of a **local food system**.

Ask your youth leader if you don't know the meaning of a word.

Air pollution
Community
Factory farms
Seasonal
Fertilizers
Farmers

Energy
Local
Water
Farmers markets
Agriculture
Grocery store

Natural
Sustainable
Fresh
Environment
Pesticides
Global

Healthy
Organic
CSA

N E G T A Y F A R M E R S M A R K E T S I I
 N R I L G L H E A L T H Y G S T R F G H U
 I L I O G R O R E R U D E R N R E C T R K M
 E R G C E N V I R O N M E N T L S I B O O S
 L S E M N M I T E T L Z E A U R N A C S M
 M M T V T E E L B A N I A T S U S R A G E E E
 T A A A I R P O L L U T I O N L C G R R D I
 A W W M O S L A K I L L C T S A E R R I Y I Y
 F A R M E R S O T E Y Y T I N U M M O C C N
 S M R A F Y R O T C A F O E A R A N U S I E
 I G R I B B E A F N A N S H T R E G L T T S
 I L A A L F E F R N N A S S E O T V U T O S Y
 T G L O B A L Y T A E E S T Z E U O U U R E I
 T A S Y R E S O M S R R I C N R T R A R E P A
 L A R U T A N C F F W R E H L O C A L E C S R
 H E C R E T S A O S F I I Y H M E T L U A I A

Lesson Plan 4: Buy Co-op!

Unit Objective: Learn why the cooperative movement began and how farm cooperatives contribute to the food supply and local economies.

Grades: 3-8

Length: 1 hour

Materials Needed: “How the Cooperative Movement Began,” “What Makes a Co-op a Co-op,” Questions, Dilemmas, scissors and bowl

Preparation Needed: Cut the questions and dilemmas into strips to be drawn out of a bowl. (Keep the questions and the dilemmas separated.)

Background:

One way to buy local is to buy through farmer-owned cooperatives. Cooperatives, also called co-ops, are a type of business in which the members own it and share in its costs and profits. Co-ops help family farmers and ranchers add value to the food, fiber and energy that they produce. Cooperatives often allow farmers to share marketing and processing costs, instead of having to bear all of these costs on their own. Co-ops allow farmers to retain ownership of their commodity further into the processing channel, which allows them a larger part of the food dollar. Farmers Union supports agricultural cooperatives and helps farmers form new cooperatives.

Teaching Strategy:

1. Set the lesson up by presenting the background information.
2. How did cooperatives come to be? Have students take turns reading each paragraph of “How the Cooperative Movement Began”
3. Divide the class into groups of four and have each group draw one of the questions. Have the group nominate a leader to present their answer.
4. There are many other types of cooperatives other than farm cooperatives. But all cooperatives have a few basic things in common. So, what makes a co-op a co-op? (Go over the Seven International Principles.)
5. Maintain the groups and have them draw a dilemma from the bowl and devise a cooperative plan that uses the cooperative principles. A new leader should be nominated to present the solution to the class for this exercise.

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Adapted from: “Better Together: Cooperation, The Essence of Cooperatives, A Study Unit for Grades 4 through 10,” Ontario Co-operative Association and Ontario Agri-Food Education, Inc.; lead writer, Kevin Crouse, OAFE Educational Consultant; with financial support of the Trillium Foundation.

How the Cooperative Movement Began

More than 100 years ago, in the English town of Rochdale, lived some weavers who produced cloth. Merchants in the town began building factories, called mills, where spinning and weaving were done by machines. The mills produced cloth much faster and cheaper than the weavers could. The cloth sold in great quantity, bringing great wealth to the mill owners, but the workers were very poorly paid.

Supplying the mills with wool was very profitable for the rural landlords; so, they began replacing the small farms with grazing land for sheep. As a result, the people who lived and worked on the farm had to move to the cities to look for jobs. So many people came to the cities that there was not enough work for everyone. The factory owners used this as an opportunity to hire women and children who worked for less money than men.

Even children as young as four or five years of age worked in factories. Sometimes they were beaten and were often expected to perform adult tasks. Working hours were long for everyone, up to 16-17 hours a day. The factories were very unhealthy places: poorly lit, smoky, dirty, noisy, and badly ventilated. The combination of poor working conditions, long hours, and poor food undermined the health of working families.

Many factory owners organized general stores, where they sold goods at high prices. They forced the workers to shop there - and fired them if they did not. The store owners mixed cheap substitutes into the food in order to increase their profits. Flour was mixed with lime or broken rice, coffee with chicory, cocoa with brown soil, and tea with dried leaves. False weights and measures were used, but there was nothing the workers could do about it.

The workers and unemployed lived in unhealthy conditions. The houses were badly built, unheated, and in poor repair, often on narrow, dirty streets. Many families had only one room and others lived in dark, damp basements.

In those years there was no regular schooling for everybody and few children learned to read and write. Many children were hungry, thin and sickly, and had to rummage through bins of garbage to look for scraps of food.

As a result of this abuse, people began to hold meetings to discuss ways to improve their situation. Strikes had not succeeded. Then toward the end of 1843, some poor, hungry, unemployed workers and their friends decided upon a solution. They wanted to break their dependence on the factory owners, who controlled production and jobs. They decided that the solution was to open their own factories and shops, and possibly to acquire houses and estates. But to do this they would need money. They began saving, although they were all very poor.

At first only 12 people were able to contribute money regularly, but as time went on, and the plan was talked about at more public meetings, the list of contributors began to grow. Finally, on October 24, 1844, when 29 people had managed to gather together 28 pounds, they were able to register themselves officially as the Rochdale Society of Equitable Pioneers. At last!

Two months later, on December 21, they were able to open their "co-operative shop" on a street called Toad Lane. It was a very small beginning. At first they were only able to sell a few items: flour, sugar, butter, oatmeal and candles. Half of their money was spent fixing their shop, but they didn't give up, and they didn't fail. By 1857 they were selling \$100,000 worth of goods a year. And the co-op they started more than 100 years ago is still going strong today.

The major contribution of the Rochdale Pioneers, as the founders have come to be called, is that their leaders developed specific principles for the operation of their business and put them down in writing.

These principles, known as the Rochdale Principles, or Cooperative Principles, became the basis of a worldwide social and economic movement.

One of the most important principles is that cooperatives are organized democratically, with each member having one vote. In an investor-owned corporation, the people who have the most money have the most votes and the most say about what the business does and what happens to the money. The people with less money have fewer shares and votes, and much less power.

In a cooperative, each member has an equal share and one vote when decisions are made. Here it is the individual member, not money, that counts. Therefore, the cooperative is an economic democracy.

NFU thanks the following groups for providing this resource:



Buy Co-op: Questions & Dilemmas

Questions:

Why did people move to the city to look for jobs? Can you describe similar examples of where this has happened, or is happening in the United States?

Why did the factory hire children? Is this possible today? Why or why not? What were the working conditions for these children?

Why did the factory hire women? What were the working conditions for women? How were these conditions different from conditions that exist today?

How did the store owners increase their profits? In what ways are consumers protected from this practice today?

Dilemmas:

Allen's Apple Orchard needs help to harvest their apples. Devise a cooperative plan that will help provide a variety of apple pickers in time for the apple harvest.

Your teacher has a bean bag chair where everyone wants to relax and read. Two students, one of which is hogging the chair, engage in a heated argument. What solution would you suggest?

Your friend's pig farm is bankrupt from low pork prices. She is afraid the farm will be sold and she will have to move. What can you do to help?

Parents in your neighborhood would like to go shopping during the day but there are no baby-sitters available at this time. What kind of co-operative venture could they develop?

You and your friends would really like to purchase a new computer game but none of you have enough money to buy it. How could you cooperate to solve your problem?

What makes a co-op a co-op?

The Seven International Principles of Cooperation

The following are Seven International Principles of Cooperation, which act as a code of practice for all cooperative ventures.

1. Voluntary and Open Membership:

Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political, or religious discrimination.

2. Democratic Member Control:

Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary cooperatives members have equal voting rights (one member, one vote).

3. Member Economic Participation: Members contribute equitably to, and democratically control, the capital of their cooperative. Members allocate surpluses for any of the following purposes: developing their cooperative; benefiting members in proportion to their transactions with the cooperative; and supporting other activities supported by the membership.

4. Autonomy and Independence: Cooperatives are autonomous, self-help organizations controlled by their members. Agreements with other organizations must be done in such a way as to preserve autonomous member control.

5. Education, Training and Information: Cooperatives provide education and training for members, elected representatives, managers and employees so that they can contribute effectively to the development of the cooperative. They inform young people about the nature and benefits of cooperation.

6. Cooperation Among Cooperatives: Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, regional, national, and international structures.

7. Concern for Community: Cooperatives work for the sustainable development of their communities through policies approved by their members.



*Adapted from "Co-operative Young Leaders"
Ontario Co-operative Association (formerly CCA, Ontario Region)*

Lesson Plan 5: Planting a Garden

- Unit Objective:** Learn how to grow fresh, local foods while practicing cooperation, measurements, gross motor skills and safety procedures.
- Length:** 2 hours
- Grades:** 1-8
- Materials Needed:** --If planting an actual garden outside: gardening shovels, hoe, rake, 2 stakes, tape measurer, 10 feet of string, 1 watering can, 4 ¼ inch dial rods cut 12 inches in length and 1 package each of corn seeds, green bean seeds, lettuce seeds, and squash seeds.
--If not feasible to do outside, this can be done symbolically, or in flower pots or flower boxes
- Preparation Needed:** -- Locate an area in which a garden may be planted
-- Draw a diagram of garden
-- Fill watering can
-- Visit <http://www.bananaslugstringband.com/sound/DirtMML.mp3> to learn the tune to “Dirt Made My Lunch.” (Lyrics follow.)

Background:

Another way to have fresh, nutritious, local food is to grow your own! Do you or anyone you know have a garden? What are some of the foods that you can grow in a garden?

People have been gardening for centuries. Native American families in the Woodlands, the East, the Southwest, and the northern Plains planted gardens long before settlers came to America. In fact, the Native Americans showed the settlers how to plant foods such as corn, beans, and squash that saved many of them from starvation.

Can anyone think of anything that we eat that doesn't originate from the soil? What about cheese? Well, cheese is made from milk, which comes from a cow, which eats grass, which grows in dirt. What about eggs? Eggs come from chickens, which eat grain, which is grown in the dirt. The fact is, EVERYTHING we eat comes from dirt!

Teaching Strategy:

1. Go over the background information and discuss all the things that come from the soil.
2. Teach the song: “Dirt Made My Lunch.” Sing it several times and sing it again while planting.
3. Announce that they will be planting an indoor or outdoor garden. If planting outside, you may divide the class into teams by having them count to five in a circle. (All the ones, will be a team; all the twos will be a team, and so on.) Team 1 students can dig the holes (tools: shovels); Team 2 students can cover the holes (tools: rake & hoe); Team 3 students can plant seeds (material: packages of seeds); Team 4 students can measure row distance and string it out (tools: tape measure, string, and stakes); Team 5 students can water seeds (tool: watering can). *Note: If you have more or less students, you can make adaptations to the teams.*
4. Take students outside with gardening materials, and explain tool safety and team cooperation.
5. Have Team 4 measure in 12 inches from the corner of one 60” & 48” side of the garden. Place one stake into the ground. Go to the other end of the garden and have Team 4 measure in 12 inches from the other corner and place a stake. Tie string to one stake and stretch it across the garden and tie to the other stake.
6. Have Team 1 dig ten holes under the string, about every six inches. If you want a precise six inches, have Team 4 measure out each hole.
7. Have Team 3 count out ten seeds from each package and plant one corn seed into each hole.
8. Have Team 2 use the rake and hoe to fill dirt into each hole.
9. Have Team 5 water each seed. Ensure the students don't wash the seeds out of the ground.
10. Move to next row, have Team 4 measure 12 inches from the corn and repeat with other seed types.

11. Once all seeds are planted, place the rods at the beginning of each row and place the seed package at the end of each row to help the students remember which types of seeds have been planted into the rows.
12. When the garden is complete, have the students gather around and explain how the seeds will grow with the aid of photosynthesis. <http://www.cornwallwildlifetrust.org.uk/educate/kids/photosyn.htm>
13. Follow up with questions and answers such as:
 1. Who planted gardens before the settlers?
 2. How will the sun help our seeds grow?
 3. How does the roots gather food and water for the plant?
 4. What do the leaves absorb?
 5. How do we know when the plants are ready to be eaten?

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Dirt Made My Lunch

Listen to the tune at: <http://www.bananaslugstringband.com/sound/DirtMML.mp3>

CHORUS:

Dirt made my lunch,
Dirt made my lunch.
Thank you Dirt, thanks a bunch,
For my salad, my sandwich
My milk and my munch 'cause
Dirt, you made my lunch.

VERSE 1:

Dirt is a word that we often use,
When we're talkin' about the earth beneath our shoes.
It's a place where plants can sink their toes;
And in a little while a garden grows.

CHORUS

VERSE 2:

A farmer's plow will tickle the ground,
You know the earth has laughed, when wheat is found.
The grain is taken and flour is ground,
For making a sandwich to munch on down.

CHORUS

VERSE 3:

A stubby green beard grows upon the land,
Out of the soil the grass will stand.
But under hoof it must bow,
For making milk by way of a cow.

CHORUS

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Optional Activities

The following activities could be incorporated at the end of any lesson to fill extra time.

1. Have youth create posters from the information that they learned today, ultimately answering the question of why it is so important to buy local. Have volunteers share posters with the class.
2. Charades or hangman with new vocabulary words.
3. Trail mix activity from Lesson Plan 2, Grade 1-2 Curriculum: Food Full Circle
4. Activities from Lesson 4, Grade 1-2 Curriculum: Preserving Fresh, Local Food
5. Check out these great activities and resources from Cornell University's Discovering the Food System Experiential Learning Program for Young and Inquiring Minds: <http://foodsys.cce.cornell.edu/pdfs/foodsys.pdf>
6. Teach some Farmers Union songs.