



## Lesson 2

## Getting to Know Your Local Food System



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# FARM TO SCHOOL

## YOUTH LEADERSHIP CURRICULUM

*Lesson 2*  
*Farm to School Youth Leadership Curriculum: 11th & 12 Grades*

**Authors:**

Erin McKee VanSlooten, Institute for Agriculture and Trade Policy (IATP) and JoAnne Berkenkamp with Natasha Mortenson, Agriculture Education Instructor and FFA Advisor, Morris Area High School and Vanessa Herald, Great Lakes Region Farm to School Coordinator, University of Wisconsin – Madison’s Center for Integrated Agricultural Systems

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## FARM TO SCHOOL YOUTH LEADERSHIP CURRICULUM

The high school level Farm to School Youth Leadership Curriculum is designed to empower youth, teach them about their local food system, engage them in meaningful, hands-on learning activities that also strengthen their school's Farm to School program and link them directly with farmers in their community. Implementation of the curriculum in a high school setting simultaneously gives students ownership and commitment to their school's Farm to School program, while reducing the amount of legwork and research required of teachers or food service staff to establish or expand a farm to school program.

The curriculum is comprised of 6 Lessons, each containing a lesson summary, a list of lesson activities, lesson outcomes, facilitator preparation notes, a materials and equipment list, additional resources, detailed facilitator descriptions of core activities, additional recommended activities, a chart of the lesson's alignment to national and Minnesota academic standards and worksheets and handouts for students. The lessons can be taught consecutively over a semester or facilitators can choose to use single lessons or activities as a complement to their classes. Activities are interdisciplinary, and may fit into classes focused on Agriculture, Family and Consumer Sciences, Social Studies, Economics, Health, Science or other subjects. The curriculum was developed with the 11th and 12th grade high school classroom setting in mind, but could also be used by educators teaching about Farm to School or local foods systems in other settings. Occasional connections with external farmers or food service professionals deeply enrich the lessons; when these connections are recommended, this is indicated in the introductory notes to give the facilitator time to prepare.

Farm to School programs link children to nearby small and mid-size farms and ranches that produce fresh, healthy and minimally processed foods that are served at their schools. Aimed at educating children about where and how their food is grown, strengthening local economies and supporting healthy eating habits, the Farm to School movement is rapidly growing.

Farm to School advances the following goals:

- Promote children's health by providing fresh, healthy and minimally processed foods in schools and supporting the development of healthy eating habits
- Enhance children's "food literacy" by familiarizing them with foods grown nearby, teaching them how and where their food is grown, building knowledge about how to prepare healthy foods, and educating them about the health, nutrition, social and environmental impacts of food choices
- Strengthen local economies by expanding markets for small and mid-size agricultural producers and food entrepreneurs whose products have typically been unavailable in school meal programs
- Build vibrant locally oriented food systems by fostering positive relationships and increase understanding of local food systems among children, farmers, parents, educators and school districts, healthcare professionals, and other community members
- Advance environmental stewardship, where practicable, by supporting more sustainable food production methods, reducing reliance on long distance transportation, and reducing food waste

We hope that this curriculum will be useful in engaging students to start or expand a Farm to School program, and we welcome feedback and stories of how it works for you!

### LESSON SUMMARY

In this lesson, students will learn the concept of a food system, and learn more about what their own local food system produces throughout the year. This understanding of the food system, local agricultural products and seasonality will help students identify opportunities to start or expand Farm to School activities at their school and to engage directly with food producers in future lessons.

### ACTIVITIES

1. What is a Food System?
2. Finding What Foods are Grown or Raised Near Us
3. Economic Benefits of Locally Grown Foods
4. Benefits and Challenges of Locally Grown Foods

Additional Activity: Class Visit: Interview a Produce Manager at a Local Co-op or Grocery Store

Additional Activity: Class Visit: Produce Distributor Who Serves Your School

Additional Activity: Finding Locally Grown Foods in Your Community

Additional Activity: Visit to Farm or Farmers Market

Additional Activity: Put Students' Critical Thinking Skills to Work

### LESSON OUTCOMES:

Students will be able to:

1. Identify and explain the major components of their local food system
2. Explain the concept of seasonality and identify food produced locally in different seasons
3. Analyze the benefits and challenges of buying and eating locally grown food items
4. Begin to take a leadership role in designing or expanding Farm to School activities at their school

### MATERIALS AND EQUIPMENT

- Copies of Worksheets and Handouts for each student:
  - Worksheet 2-1: What's Local and When?
  - Worksheet 2-2: Hometown City Exercise
  - Worksheet 2-3: The Benefits and Challenges of Locally Grown Foods
  - Handout 2-1: Steps in the Food System (one set for each small group of students)

- Tape, pins, magnets, velcro or staples that students can use to adhere printouts to a classroom surface

- Chalk, markers or yarn for students to make connections between each step of the food system
- Copies of articles on benefits of locally grown foods

## ADDITIONAL RESOURCES

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- **LOCAL FOOD SYSTEMS: CONCEPTS, IMPACTS AND ISSUES (PG 1–4), USDA ECONOMIC RESEARCH SERVICES**

- [www.ers.usda.gov/media/122868/err97\\_1\\_.pdf](http://www.ers.usda.gov/media/122868/err97_1_.pdf)

The introduction to a 2010 report on local foods by the USDA (pdf)

- **NATIONAL FARMERS UNION “GROWING GOOD TASTE” 2011 CURRICULUM**

- <http://www.nfu.org/education/education-materials>

This curriculum’s goal is making sure consumers know their food really comes from America’s farm and ranch families. The lesson plans also look at how producers receive very little from each food dollar spent by consumers.

- **LOCAL FOOD SEASONALITY CHART EXAMPLES**

Visual charts showing what products are available during the seasons in specific areas. For example:

- Minnesota: <http://www.mda.state.mn.us/~media/Files/food/minnesotagrown/producecalendar.ashx>
- New York: <http://www.agriculture.ny.gov/fzs/documents/HarvestChart.pdf>
- Nebraska: <http://toolkit.centerfornutrition.org/category/list-of-resources/> (pdf and website)

- **“LOCAL AND REGIONAL FOOD SYSTEMS”**

- <http://www.gracelinks.org/254/local-regional-food-systems>

A summary document of the major issues in community based food systems. (website)

- **USDA “KNOW YOUR FARMER KNOW YOUR FOOD”**

USDA website focused on strengthening local and regional food systems with a Tools and Resources section rich in regional information with several mapping tools (website).

- ***FRENCH FRIES AND THE FOOD SYSTEM: A YEAR ROUND CURRICULUM CONNECTING YOUTH WITH FARMING AND FOOD***

An agriculture and food system curriculum guide connecting high school students with the land and environment around them. (curriculum)

- ***FRESH***

A film that explores the farmers, thinkers, and business people across America who are re-inventing our food system. The film is 72-minutes long and appropriate for high school audiences. (film)

- ***OUT TO PASTURE: THE FUTURE OF FARMING?***

- <http://www.jhsph.edu/research/centers-and-institutes/teaching-the-food-system/curriculum/film.html>

A short film (34 minutes) from The Johns Hopkins Center for a Livable Future that contrasts raising food animals on pasture with the prevailing industrial approach. Several pasture-based farmers are profiled; they discuss how they got started in farming (three transitioned from confinement operations), what’s important about their farming methods, how their conventional-farm neighbors view them, how to keep young people on the farm, the future of the food system and other topics. (film)

■ “BUYING LOCAL FOOD FOR FOOD SERVICE IN MINNESOTA,” MINNESOTA PROJECT:

➤ <http://www.mnproject.org/pdf/Guide%20to%20Buying%20Local.pdf> (article)

■ The National Sustainable Agriculture Coalition (NSAC)

An alliance of grassroots organizations that advocates for federal policy reform to advance the sustainability of agriculture, food systems, natural resources, and rural communities (website).

■ FARM AID

➤ <http://www.farmaid.org>

Willie Nelson, Neil Young and John Mellencamp organized the first Farm Aid concert in 1985 to raise awareness about the loss of family farms and to raise funds to keep farm families on their land. Dave Matthews joined the Farm Aid Board of Directors in 2001. Farm Aid is a nonprofit organization whose mission is to keep family farmers on their land. (website).

## LESSON INITIATION

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Where do you purchase food?

Ask students to brainstorm all of the different places they or their families purchase food. Where else might individuals or groups purchase food? Remind students to consider fresh product as well as prepared food items. Write the answers on the board, and ask students to think about how the food gets from where it is grown to its final destination and how it is processed in between.

## LESSON INTRODUCTION

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After the lesson initiation, pose this question to the class: “Where does our food come from?” Write highlights down on the board, and ask further prompts including the *Who, What, Why, Where, When and How* questions about everything that brings our food from the soil to the plate, especially the school lunch plate. Explain to students that in this lesson, we will learn about the food system, including

the steps our food takes from field to plate. Students will learn more about what items are grown locally and during which seasons. Students will also have the chance to learn more about the benefits and challenges of eating locally grown food. This activity can be used as an assessment for the instructor to get a baseline understanding of what students currently know, allowing adaption of the lesson as needed.

## ACTIVITY 1: WHAT IS A FOOD SYSTEM? (30-45 MINUTES)

### ► Handout 2-1: Steps in the Food System

Enlarge/photocopy steps in Handout 2-1 and prepare tape, pins, magnets, velcro or staples that students can use to adhere them to a classroom surface. Provide chalk, markers or yarn for students to make connections between each step of the food system.

For this lesson, students will identify pieces of the food system, sequence them, and make connections between different parts of the system as they trace four food items from field to plate.

To start this lesson, have the students break up into small groups to come up with their own definitions of a food system. Their answers will give a good assessment of their current knowledge.

Next, ask the students to close their eyes while the instructor reads the definition of “food system” below. Read the definition slowly and ask the students to visualize each step in the process. Re-read the definition to the students, and compare to the definitions their small groups came up with. Ask students if they have any questions about the definition of “food system.” Allow students to refer to the Farm to School lingo sheet if needed.

“A food system is a set of interdependent processes that together provide food to a community. This includes the growing, harvesting, storing, transporting, processing, packaging, marketing, retailing and consuming of the product. Some or all of these steps in the food system may be within the community but they also may be part of the global or regional system instead.”

In the hands-on component of this activity, students can be divided into small groups, or work together as a whole classroom. Give students a printed out set of the steps representing the food system for a particular food item. If you have extra time, you can ask each group to design or search online for images representing each step in their set. Ask each group to arrange the steps in the proper order “from field to plate,” representing the trip the food item makes through the various parts of the food system. Students should use the chalk, markers or yarn to draw arrows or make connections between each step of the food system in order. When the groups are finished, go over each food item’s journey with the class, letting the students explain its trip from field to plate to the rest of the class.

Explain to students that the food system is a cycle, and doesn’t have a beginning or end. Ask students what the next steps of the system would be if we continued to follow the food after it is served. Food scraps that are not eaten can be composted to make rich soil to grow more crops.

This activity allows students to consider all the steps and participants in the food system and engages students to see the relationship between steps of the food system. The five food types represented in the food system are fruits (apples), vegetables (radishes), grains (wheat), meat (chicken) and dairy (milk).

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## ACTIVITY 2: SEASONAL FOODS IN YOUR REGION (30 MINUTES)

### ► Worksheet 2-1: What’s Local and When?

In this activity, students will identify foods that are produced locally and will research when they are in season. Students will investigate a broad range of items, such as produce, grains and meats. Have student take notes on Worksheet 2-1 about items that are grown close to their community. Students can work online to do their research

or from print resources provided by the instructor. If your students will not have access to the internet during the lesson, be prepared to print out multiple copies of a seasonality chart appropriate to your area for students

to use in class. Instructors may need to research ahead of time to find appropriate state and local sources that list local and seasonal foods.

### Resources to Find Seasonal Foods in Your Region:

Most states, and sometimes regions within a state, have a guide to seasonal products produced in the state. Examples from different regions across the country are listed below. Search your Department of Agriculture website or your Cooperative Extension resources for such a guide to your area. For instance:

- Minnesota Grown: A Seasonal Look at Fresh Produce:  
<http://www.mda.state.mn.us/~media/Files/food/minnesotagrown/producecalendar.ashx>
- Nebraska: Seasonality of Foods in Nebraska  
<http://toolkit.centerfornutrition.org/wp-content/uploads/2012/04/Seasonality-Chart.pdf>

- North Carolina: Make it Local for All Seasons (English and Spanish)  
<http://www.ncsu.edu/project/nc10percent/seasonality.php>
- New York: Pride from A(pples) to Z(ucchini)  
<http://www.agriculture.ny.gov/fzs/documents/HarvestChart.pdf>
- Oregon: What Local Products Are in Season?  
<http://oregonfresh.net/local-products/whats-in-season/>

Other nonprofits, educational services and businesses provide lists of seasonal foods available by state or region. One example is below, but many others may be available too.

- The Local Food Wheel (available for the Upper Midwest, Bay Area California, New York)  
<http://www.localfoodswheel.com/>

After students complete the worksheet, discuss the answers among the class.

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## ACTIVITY 3: HOMETOWN CITY EXERCISE (45 MINUTES)

### ➔ Worksheet 2-2: Hometown City Exercise

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The multiplier effect describes how an increase in some economic activity starts a chain reaction that generates more activity than the original increase wherein an increase in spending produces an increase in national income and consumption greater than the initial amount spent. For example, if a corporation builds a factory, it will employ construction workers and their suppliers as well as those who work in the factory. Indirectly, the new factory will stimulate employment in laundries, restaurants and service industries in the factory's vicinity. *Definition taken from The American Heritage® New Dictionary of Cultural Literacy, Third Edition.*

Assign students the roles of community organizations or individuals in a town, and have them complete the transactions in Parts 1 and 2 of Worksheet 2-2, keeping track of their progress on the provided chart.

Lead the class in the following discussion questions after completing the exercise:

#### 1. Did you have more money at the end of part 2 than you did at the end of part 1? If yes, how much?

(18 of the 31 organizations or individuals had more money at the end of part 2, when food was purchased from local farmers.)

## 2. Why did the community gain money when people purchased food locally?

- The community retained money that used to be spent in companies in other communities.
- Profits within the community stimulated additional business within the community (i.e., the purchase of additional gas, building supplies and services).

Caution students that this is a simple and extreme demonstration.

## 3. Are there other reasons to purchase food locally?

- Potentially improved quality and freshness
- Potentially improved nutrition
- Greater stability of the food supply
- Maintaining cultural heritage
- Others?

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## ACTIVITY 4: BENEFITS AND CHALLENGES OF LOCALLY GROWN FOOD (20-30 MINUTES)

### ➔ Worksheet 2-3: Benefits and Challenges of Locally Grown Food

#### Resources Needed

Print copies of each of the following articles for students to read. Students will be divided into small groups, and each group will read and discuss one article.

- "Is local Hamilton food better for you?" CBC News  
<http://www.cbc.ca/hamilton/news/story/2012/05/09/hamilton-food-test.html?cmp=rss>
- Local Foods – Are they more Nutritious?" Jennifer Wilkins, Cornell University  
[http://m.poststar.com/lifestyles/health-med-fit/article\\_2bd2839e-bb61-11df-b6a3-001cc4c03286.html](http://m.poststar.com/lifestyles/health-med-fit/article_2bd2839e-bb61-11df-b6a3-001cc4c03286.html)
- "Is local more nutritious?" Harvard University School of Public Health  
<http://chge.med.harvard.edu/resource/local-more-nutritious>
- "An Interview with Economist Michael Shuman" on Community Food Enterprises, Wendy Wasserman, Civil Eats  
<http://civileats.com/2009/12/09/an-interview-with-economist-michael-shuman/>
- "Buying Local Helps to Boost the Economy" Bernadette Logozar, Cornell University Cooperative Extension

<http://www.ccenny.com/wp-content/uploads/2011/07/Buying-Local-Helps-Boost-Local-Economy.pdf>

- "L.A. Unified's local food push is healthy for area economy too" Teresa Watanabe, Los Angeles Times  
<http://articles.latimes.com/2013/nov/24/local/la-me-laUSD-food-20131124>

In this lesson students will use analytical skills to determine the benefits and challenges of buying and eating food grown locally. Students will learn the benefits of locally grown foods, and will also use critical thinking skills to examine commonly held beliefs about locally grown foods. Students will work in small groups and read and discuss one of the three articles listed below. As a group they will answer questions on Worksheet 2-3. After all small groups have discussed their articles the class will reconvene to share what each group has learned.

Bring the class back together and discuss the benefits of starting a Farm to School program that would get locally grown foods into your school meals. Ask students to share the benefits and challenges they discussed with their groups and list them on the board. Explain to students that they can help to kickstart Farm to School activities at your school through their work in this class, emphasizing their ability to serve as leaders through the process.

## ADDITIONAL ACTIVITIES

### **Class Visit: Interview a Produce Manager at a Local Co-op or Grocery Store**

The instructor can set up a time for this person to visit the class. As an important intermediary in the process of getting locally grown foods from farm to plate, a produce manager, local butcher or other community member with a similar position can provide a great perspective on the insides of the food system.

### **Class Visit: Produce Distributor Who Serves Your School**

Similar to the above, invite the food distributor who works with your school district to come and talk to the class about how they purchase their fruits and vegetables from local, national and international sources. Why and how do they purchase what they do?

### **Finding Locally Grown Foods in Your Community**

Where are locally grown foods available in your community? Grocery stores, farmers markets, your home garden, community gardens, other schools that have gardens or buy locally, restaurants, colleges, hospitals, etc.? Brainstorm a list of other institutions in your community. Institutions are organizations, such as other schools, colleges, hospitals, municipal buildings, prisons or large businesses that have a cafeteria for employees. These organizations serve many people every day and purchase large quantities of food. Have students conduct online research or make phone calls to learn if these institutions purchase food locally, and more details about how they do it. Students should write down the information they learn in your Farm to School Journal.

### **Visit to Farm or Farmers Market**

Encourage students to get out into the community and visit a farm or farmers market, either through a group visit with the class or on their own. While there, students can talk with farmers about what they have been studying.

### **Put Students' Critical Thinking Skills to Work**

Now that students have learned some of the benefits of local food, and have thought critically about its challenges, send them to the internet to do local food research, asking them to highlight things they find that may be misconceptions about local food. The Sustainable Table website is a good place to start researching; it has lots of information about the benefits of local food, including citations. <http://www.gracelinks.org/254/local-regional-food-systems>

Another good resource is Michigan State University's Center for Regional Food Systems website: <http://foodsystems.msu.edu/>

#### NATIONAL COMMON CORE STANDARDS FOR ENGLISH LANGUAGE ARTS

**CCSS.ELA-LITERACY.RH.11-12.2** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

**CCSS.ELA-LITERACY.RST.11-12.7** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

**CCSS.ELA-LITERACY.RST.11-12.9** Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

**CCSS.ELA-LITERACY.W.11-12.1B** Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.

**CCSS.ELA-LITERACY.W.11-12.8** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

#### THE COMMON CORE MATH STANDARDS

**CCSS.MATH.CONTENT.HSN-VM.C.6 (+)** Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.

**CCSS.MATH.CONTENT.HSN-VM.C.7 (+)** Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.

**CCSS.MATH.CONTENT.HSN-VM.C.8 (+)** Add, subtract, and multiply matrices of appropriate dimensions.

#### THE MN MATH STANDARDS (2007)

**9.2.2.5** Recognize and solve problems that can be modeled using finite geometric sequences and series, such as home mortgage and other compound interest examples. Know how to use spreadsheets and calculators to explore geometric sequences and series in various contexts.

#### THE COMMON CORE SCIENCE STANDARDS

None identified

## THE MN SCIENCE STANDARDS (2009)

None identified

## THE MN SOCIAL STUDIES STANDARDS (2011)

9.2.4.5.2 Describe the role of markets in the movement of resources, goods and services, and money in an economy.

9.2.4.6.2 Explain the impact of various market structures on long-run profit, price, production, and efficiency in the market.

9.3.2.4.4 Describe patterns of production and consumption of agricultural commodities that are traded among nations.

9.3.2.4.3 Explain how technological and managerial changes associated with the third agricultural revolution, pioneered by Norman Borlaug, have impacted regional patterns of crop and livestock production.

9.3.4.9.1 Analyze the interconnectedness of the environment and human activities (including the use of technology), and the impact of one upon the other.

**INSTRUCTIONS:**

Cut out the cards and arrange the steps of each food type in the proper order "from field to plate," representing the trip the food item makes through the various parts of the food system.

Bottling Plant Milk	Grocery store/ school Milk	Tanker truck Milk	Milking cow Milk
Truck Milk	Milk stored in bulk tank in milk house on farm Milk	Distributor warehouse Milk	Cow in pasture Milk
Distributor truck Milk	Transported to packing house Apple	Made into applesauce Apple	Put into boxes Apple
Growing on trees Apple	Put on a truck Apple	Put on a truck Apple	Packed into boxes in packing house Apple

Delivered to grocery store <b>Apple</b>	Transported to processing facility <b>Apple</b>	Harvested by hand into bin <b>Apple</b>	Delivered to a distributor <b>Apple</b>
Put into jars <b>Apple</b>	Transported to processing center by truck <b>Radish</b>	Sorted by machine and hand into different sizes <b>Radish</b>	Put on a truck <b>Radish</b>
Harvested by hand or by specialized tractor <b>Radish</b>	Delivered to a distributor <b>Radish</b>	Bunched by hand and placed in bins <b>Radish</b>	Packaged into bags <b>Radish</b>
Delivered to grocery store/school <b>Radish</b>	Greens removed by machine <b>Radish</b>	Bags put into boxes for transport <b>Radish</b>	Growing in the field <b>Radish</b>
Transported by truck <b>Radish</b>	Washed by machine <b>Radish</b>	Milled to flour at mill <b>Grain (wheat)</b>	Made into bread <b>Grain (wheat)</b>

Wheat harvested by tractor and fed into bin on tractor	Wheat in field	Delivered to bakery	Harvested wheat trucked to mill
Grain (wheat)	Grain (wheat)	Grain (wheat)	Grain (wheat)
Put on truck	Bagged at mill	Chicken frozen	Boxes delivered to school
Grain (wheat)	Grain (wheat)	Chicken	Chicken
Chicken processed	Chicken on farm	Boxes on truck	Chickens on truck to processing facility
Chicken	Chicken	Chicken	Chicken
Delivered to school	Chicken packed into boxes		
Chicken	Chicken		

#### MILK ORDER:

- Cow in pasture
- Milking cow
- Milk stored in bulk tank in milk house on farm
- Tanker truck
- Bottling plant
- Truck
- Distributor warehouse
- Distributor truck
- Grocery store/school

#### APPLE ORDER:

- Growing on tree
- Harvested by hand into bin
- Transported to packing house
- Packed into boxes in packing house
- Transported to processing facility
- Made into applesauce
- Put into jars
- Put into boxes
- Put on a truck
- Delivered to a distributor
- Put on a truck
- Delivered to grocery store

#### RADISH ORDER:

- Growing in the field
- Harvested by hand or by specialized tractor
- Bunched by hand and placed in bins
- Transported to processing center by truck
- Greens removed by machine
- Washed by machine
- Sorted by machine and hand into different sizes
- Packaged into bags
- Bags put into boxes for transport
- Transported by truck
- Delivered to a distributor
- Put on a truck
- Delivered to grocery store

#### GRAIN (WHEAT) ORDER:

- Wheat in field
- Wheat harvested by tractor and fed into bin on tractor
- Harvested wheat trucked to mill
- Milled to flour at mill
- Bagged at mill
- Put on truck
- Delivered to bakery
- Made into bread

## CHICKEN ORDER:

- Chicken on farm
- Chickens on truck to processing facility
- Chicken processed
- Chicken frozen
- Chicken packed into boxes
- Boxes on truck
- Boxes delivered to school

NAME:

### Instructions:

For this activity, students will use their detective skills to find out which food products are grown nearby. You can define “nearby” however your class decides: within your county, state, region or a definition that better suits your community. Use printed guides provided by the instructor or search online for a seasonal food guide to complete this worksheet.

### Resources for Finding Locally Grown Foods

Your state likely has a guide to food products grown or raised in your area. Some examples of local food charts are listed below. Search your Department of Agriculture website or your Cooperative Extension resources for a guide to your area. You can also conduct a web search using a combination of the following search terms: “Your State Name” or “The name of your region within a state”

AND “Food or Agricultural Seasonality Chart” or “Local food seasonality chart”

Examples of Seasonal Guides:

- Minnesota Grown: A Seasonal Look at Fresh Produce  
<http://www.mda.state.mn.us/~media/Files/food/minnesotagrown/producecalendar.ashx>
- Nebraska: Seasonality of Foods in Nebraska  
<http://toolkit.centerfornutrition.org/wp-content/uploads/2012/04/Seasonality-Chart.pdf>

- North Carolina: Make it Local for All Seasons (English and Spanish)  
<http://www.ncsu.edu/project/nc10percent/seasonality.php>
- New York: Pride from A(pples) to Z(ucchini)  
<http://www.agriculture.ny.gov/fzs/documents/HarvestChart.pdf>
- Oregon: What Local Products Are in Season?  
<http://oregonfresh.net/local-products/whats-in-season/>

Sometimes these charts only include information about local fruits and vegetables, but do not include local meat, dairy products or beans and grains. Some charts only show information about when products are harvested and do not include information about products can be stored and thus remain available far beyond their harvest time (for example: potatoes, beets, other root vegetables, apples or winter squash). To get a fuller picture of your local foods scene, search for a local foods directory for your area and look at the websites of your local farmers markets, which often have information about what products are available when.

When you find helpful resources, answer the following questions:

Which products are included in the seasonality chart? Are fruits, vegetables, meat, dairy and grains included?

During which month are most products harvested locally?

What is your favorite food grown during each season (summer, fall, winter, spring)?

List one food that is grown or available during the winter.

List at least one food from each group that is grown locally:

Fruit:

Vegetable:

Meat:

Grain:

Dairy:

Is there a food you love that is not grown locally according to the resources you found? If so, can you identify an alternative to your favorite food that is local?

Are there any foods on the chart that you have never eaten?

Is there anything about the chart that surprises you?

List some foods grown in your region that you would like to see on your school lunch or breakfast menu:

NAME:

### PART 1:

The instructor will assign students to act as the following community members and business entities with funds as specified:

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School board .....	\$100,000	Teacher .....	\$2,000
Grocery store .....	\$50,000	Grocery store worker .....	\$900
Restaurant, sit down .....	\$10,000	Waitress .....	\$500
Restaurant, fast food .....	\$12,000	Shoe store clerk .....	\$1,000
Caterer .....	\$2,000	Book store clerk .....	\$1,000
Shoe store .....	\$25,000	Pharmacist .....	\$3,000
Book store .....	\$25,000	Medical doctor .....	\$4,000
Drug store .....	\$40,000	Dentist .....	\$3,500
Movie theatre .....	\$30,000	Gas station attendant .....	\$500
Clothing store .....	\$30,000	Factory worker .....	\$1,000
Hotel .....	\$50,000	Bank .....	\$100,000
City government .....	\$100,000	TOTAL: .....	\$822,400
Hardware/appliance store .....	\$40,000		
Church .....	\$35,000		
Roller skating rink .....	\$35,000		
Factory .....	\$90,000		
Gas station/convenience store .....	\$25,000		
Dairy farmer .....	\$2,000		
Beef cattle farmer .....	\$2,000		
Vegetable farmer .....	\$2,000		

Complete the following transactions in order, balancing the checkbook as you go. Record of Transactions may be used to track payments and deposits.

**Transaction 1:**

The city government collects \$13,748 in taxes: 2 percent from everyone except from the church and themselves (city government).

**Transaction 2:**

The school food service (school board) orders food for the following week:

- \$2,000 meat from distributors in another city
- \$1,000 milk from a national dairy chain
- \$2,000 fruits and vegetables from a national food distributor
- \$1,000 bread from a national distributor

**Transaction 3:**

The dairy farmer, vegetable farmer, beef farmer, teacher, grocery store worker, waitress, shoe store clerk, book store clerk, pharmacist, doctor, dentist, gas station attendant, and factory worker pay \$10 to the school board for their kids' lunches.

**Transaction 4:**

The grocery store orders \$40,000 food from out-of-state distributors.

**Transaction 5:**

The dairy farmer, vegetable farmer, beef farmer, teacher, grocery store worker, waitress, shoe store clerk, book store clerk, pharmacist, doctor, dentist, gas station attendant and factory worker spend \$120 each on food for the week at the grocery store.

**Transaction 6:**

The hotel is the site of a dental association conference.

- A. They order \$5,000 in food from out-of-town distributors.
- B. The hotel earns \$16,000 in room rental.

**Transaction 7:**

The dentist wants a new pair of shoes for the conference. He purchases a \$120 pair of shoes from the shoe store.

**Transaction 8:**

The dentist has friends coming to town for the conference. He plans a small party at his home and pays the caterer \$500 to cater it.

**Transaction 9:**

The caterer spends \$200 at the grocery store on food for the party.

**Transaction 10:**

Professionals attending the conference spend \$400 on gas at the gas station, \$60 at the movie theatre, \$300 at the clothing store, \$70 at the book store, \$120 at the sit-down restaurant, \$80 at the fast food restaurant and \$25 at the drug store

**Transaction 11:**

The church collects \$85 in offering. (\$15 each from the dairy farmer, the beef cattle farmer, and the teacher, \$10 from the factory worker, the shoe store clerk, and the pharmacist, and \$5 from the waiter/waitress and the gas station attendant.)

## PART 2

Continue to act as community members and business entities with funds as specified at the beginning of part 1. Then complete the new transactions, balancing the checkbooks as you go:

### Transaction 1:

The city government collects \$13,748 in taxes: 2 percent from everyone except the church and themselves.

### Transaction 2:

The school food service (school board) orders food for the following week:

- \$1,000 beef from the local beef farmer and \$1,000 meat from distributors in another city
- \$1,000 milk from the local dairy farmer
- \$1,500 fruits and vegetables from the local vegetable farmer and \$500 from a national distributor
- \$1,000 bread from a national distributor

### Transaction 3:

The dairy farmer, vegetable farmer, beef farmer, teacher, grocery store worker, waitress, shoe store clerk, book store clerk, pharmacist, doctor, dentist, gas station attendant and factory worker pay \$10 to the school board for their kids' lunches.

### Transaction 4:

The grocery store orders \$7,000 beef from the local beef farmer, \$8,000 milk from the local dairy farmer, \$10,000 fruits and vegetables from the local vegetable farmer and \$15,000 food from out-of-state distributors.

### Transaction 5:

The dairy farmer, vegetable farmer, beef farmer, teacher, grocery store worker, waitress, shoe store clerk, book store clerk, pharmacist, doctor, dentist, gas station attendant, and factory worker spend \$120 each on food for the week at the grocery store.

### Transaction 6:

- A. The dairy farmer decides to expand his farming operations. He borrows \$70,000 from the bank.
- B. He pays an interest rate of 4%, and the bank sells his loan to another investor for \$71,000.

### Transaction 7:

The dairy farmer pays the gas station attendant \$5,000 to provide part of the labor for framing up the expansion on his barn. The farmer also spends \$11,000 at the hardware store on supplies and lumber.

### Transaction 8:

The hotel is the site of a dental association conference. They order \$1,500 worth of beef, \$2,000 worth of vegetables and fruits and \$500 milk from the local farmers and \$1,000 food from out-of-town distributors and make \$16,000 in room rental.

### Transaction 9:

The dentist wants a new pair of shoes for the conference. He purchases a \$120 pair of shoes from the shoe store.

### Transaction 10:

Business is good, so the shoe store clerk is given a raise of \$0.50 per hour. This is about \$80 per month.

### Transaction 11:

The dentist has friends coming to town for the conference. He plans a big party at his home and pays the caterer \$2,000 to cater it. The caterer spends \$550 on food and supplies at the grocery store and pays the waitress \$200 to help serve.

**Transaction 12:**

The caterer buys an \$80 pair of shoes from the shoe store. The teacher, the doctor and the pharmacist are all invited to the party and pay \$135 each for new clothes.

**Transaction 13:**

The vegetable farmer's daughter celebrates her 11th birthday with a party at the skating rink. The party costs \$240. Guests spend \$25 at the bookstore, \$45 at the clothing store, \$15 at the drug store and \$15 at the movie theater on gifts.

**Transaction 14:**

Increased trucking from farms to institutions increases the demand for gasoline. The vegetable farmer spends \$120 on gasoline, while the beef farmer spends \$105 and the dairy farmer spends \$70.

**Transaction 15:**

Professionals attending the conference spend \$400 on gas at the gas station, \$60 at the movie theatre, \$300 at the clothing store, \$70 at the book store, \$120 at the sit-down restaurant, \$80 at the fast-food restaurant and \$25 at the drug store.

**Transaction 16:**

The shoe store clerk takes his girlfriend, the grocery store worker, out to celebrate his raise. They spend \$35 at the sit-down restaurant.

**Transaction 17:**

The church collects \$125 in offering. (\$20 each from the dairy farmer, the beef cattle farmer and the teacher, \$15 from the factory worker, the shoe store clerk and the pharmacist, and \$10 from the waitress and the gas station attendant.)





### PART 1

Report the amount of money the organization or individual has at the end of the part 1 transactions:

School board .....	\$92,130	Gas station/convenience store .....	\$24,900
Grocery store .....	\$10,760	Dairy farmer .....	\$1,815
Restaurant, sit down .....	\$9,920	Beef cattle farmer .....	\$1,815
Restaurant, fast food .....	\$11,840	Vegetable farmer .....	\$1,830
Caterer .....	\$2,260	Teacher .....	\$1,815
Shoe store .....	\$24,620	Grocery store worker .....	\$752
Book store .....	\$24,570	Waitress .....	\$355
Drug store .....	\$39,225	Shoe store clerk .....	\$840
Movie theatre .....	\$29,460	Book store clerk .....	\$850
Clothing store .....	\$29,700	Pharmacist .....	\$2,800
Hotel .....	\$60,000	Medical doctor .....	\$3,790
City government .....	\$113,748	Dentist .....	\$2,680
Hardware/appliance store .....	\$39,200	Gas station attendant .....	\$355
Church .....	\$35,085	Factory worker .....	\$840
Roller skating rink .....	\$34,300	Bank .....	\$98,000
Factory .....	\$88,200	TOTAL: .....	\$788,455

## PART 2

Students should report the amount of money the organization or individual has at the end of the part 2 transactions:

School board .....	\$92,130	Gas station/convenience store .....	\$25,195
Grocery store .....	\$11,110	Dairy farmer .....	\$62,440
Restaurant, sit down .....	\$9,955	Beef cattle farmer .....	\$11,205
Restaurant, fast food .....	\$11,840	Vegetable farmer .....	\$14,970
Caterer .....	\$3,130	Teacher .....	\$1,675
Shoe store .....	\$24,620	Grocery store worker .....	\$752
Book store .....	\$24,595	Waitress .....	\$550
Drug store .....	\$39,240	Shoe store clerk .....	\$880
Movie theatre .....	\$29,475	Book store clerk .....	\$850
Clothing store .....	\$30,150	Pharmacist .....	\$2,660
Hotel .....	\$60,000	Medical doctor .....	\$3,655
City government .....	\$113,748	Dentist .....	\$1,180
Hardware/appliance store .....	\$50,200	Gas station attendant .....	\$5,350
Church .....	\$35,125	Factory worker .....	\$835
Roller skating rink .....	\$34,540	Bank .....	\$99,000
Factory .....	\$88,200	TOTAL: .....	\$889,255



## Lesson 2: Getting to Know Your Local Food System

### Worksheet 2-3: The Benefits and Challenges of Locally Grown Foods

Name:

**Instructions:**

Read the article given to your group by your instructor. Read the article silently to yourself, and then discuss what you have read with your small group. As a group, answer the questions in this worksheet and select one person in your group to report back to the classroom.

You will read one of the following articles:

- “Is local Hamilton food better for you?” CBC News
- “Local Foods – Are they more Nutritious?” Cornell University
- “Is local more nutritious?” Harvard University School of Public Health
- “An Interview with Economist Michael Shuman” on Community Food Enterprises, Wendy Wasserman, Civil Eats
- “Buying Local Helps to Boost the Economy” Bernadette Logozar, Cornell University Cooperative Extension
- “L.A. Unified’s local food push is healthy for area economy too” Teresa Watanabe, Los Angeles Times

From this article, what do you think are the benefits of buying or eating locally grown food?

From reading this article, do you think there are any downsides or challenges to eating or buying locally grown food?

Does this article change any ideas you had about locally grown food previously?

Name something from this article that you would like to know more about? Name something from this article that you would like to know more about?

How can local foods and Farm to School programming encourage students to develop healthy eating habits?

