

Foodways: Sustainable Food Systems

Teacher Edition



Oak Meadow

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Teacher Edition Introduction

Foodways: Sustainable Food Systems is a course that explores what we eat, why we eat it, and how we get our food. Historical events, cultural traditions, social structures, geographic features, and economic practices all factor into our food choices and options. As your student progresses through the course, they may learn uncomfortable truths about food scarcity, loss of food diversity, and food justice issues. Having the opportunity to discuss what they are learning will help students process this information and give them a voice in working toward change and access to healthy food for all.

The student's coursebook contains all the instructions and assignments for this single semester, 18-week course. Throughout the course, students will be doing research and reading using additional sources such as nonfiction books, websites, and videos. A list of the curriculum resources used in this course can be found online at oakmeadow.com/curriculum-links.

In addition, students are required to choose one book to read related to food systems. There is a list of possible choices in lesson 2; students are encouraged to choose and acquire the book within the first month of starting the course. The book reading will be completed by lesson 7; students needing more time to read will want to get the book earlier.

This teacher edition is designed to help you support your student as they move through this course. In addition to factual answers to assignment questions, you will find tips on how to assess student responses, and suggestions for ways to guide your student's learning.

You may want to look over the teacher edition answers before your student begins work on a lesson. There are notes on how to support your student and alternate options that may be helpful.

In this teacher edition, you will find the full text for all assignments and activities. Teacher edition answers are seen in orange. If you are homeschooling independently, this teacher edition can serve as your support as you guide and evaluate your student's work. When a student gets a factual answer wrong, you can share the correct answer and address any underlying misconceptions. Several incorrect answers related to a particular topic point to an area the student will benefit from revisiting.

For obvious reasons, it is best not to share this teacher edition with your student. Each student is expected to produce original work, and any incidence of plagiarism should be taken very seriously. If you notice a student's answers matching those of the teacher edition word for word, a discussion about plagiarism and the importance of doing original work is necessary. While students in high school are expected to be well aware of academic honesty, any discussion about it should be

approached as a learning opportunity. Make sure your student is familiar with when and how to properly attribute sources (there's an extensive section on this in the appendix).

We encourage you and your student to explore the topics of this course together. Food systems and food access affects every human being. By taking an interest in what your student is learning, you convey the sense of the vital importance of this work.



Coursebook Introduction

Food is fundamental to human existence, as it is to all living beings on the planet. Many people are fortunate enough to get plenty to eat, but many others experience food scarcity or a lack of access to healthy food. This course explores how our food systems work and how they might be improved so that everyone has access to the healthy food they need. The emphasis is primarily on food systems in the United States but much of the information is readily applicable to any food system in the world.

The term **foodways** describes what we eat, why we eat it, and how we get it. Historical events, cultural traditions, social structures, geographic features, and economic practices all factor into our food choices and options.

The next time you are eating, take a moment to ask yourself, “Where did this food come from? Where was it grown? How long ago was it harvested? How long did it take to travel to where I live?” For most of us, we usually have no idea of what happened to our food before it reached our plates. In this course, you’ll explore the many interconnected systems that work together to bring food from the farm to our tables.

What to Expect in This Course

In this course, there are 18 lessons, each of which will take approximately one week to complete. This coursebook includes information and assignments needed to complete the course, with additional reading and viewing found online. You will need to acquire and read one additional book of your choice; details about this are in lesson 2.

You will find the following sections in some or all of the lessons:

- An **Assignment Checklist** is found at the beginning of each lesson so you can see at a glance what you’ll be doing, and check off assignments as you complete each one. Assignments are fully explained in the lesson.
- **Learning Objectives** outline the main goals of the lesson and give you an idea of what to expect.
- **What You Need to Know** sections provide the background information needed to understand the lesson’s topic.
- **Read and Watch** sections provide additional research and study using a variety of sources; online sources for this course can be found at oakmeadow.com/curriculum-links/.

- **Think About It** topics are designed to help you consider and reflect on important concepts and issues. You are encouraged to discuss your thoughts with others as this will further deepen your understanding of the material.
- **Assignments** give you the opportunity to make connections, explore issues, and demonstrate your grasp of concepts, as well as clarify your own ideas and opinions.
- **Activities** provide a wide range of ways to explore what you are studying. All activities are a required part of the course.
- **Up for a Challenge?** is an optional section that provides more ways to dive into the lesson topics. These activities are not required.
- **Share Your Work** sections at the end of most lessons provide reminders and information for students who are enrolled in Oak Meadow School and submitting work to their Oak Meadow teacher.
- The **Appendix** contains important material that you will be expected to read and incorporate into your work throughout the year. Take some time to familiarize yourself with the resources in the appendix. You will find information about academic expectations, tips on how to avoid accidental plagiarism, and details on citing sources and images.

It is assumed that you will be working with an adult who assesses and supports your learning whether you are enrolled in Oak Meadow or are using this course independently. This teacher—who may be a parent, tutor, or Oak Meadow teacher—is the one to whom you should turn if you have questions about your assignments or how to get the most out of this course.

If you are an enrolled student in Oak Meadow's distance learning school, be sure to look closely at the Google course doc your Oak Meadow teacher sends because some assignments may have been modified.

A New Appreciation for Food

Whether we are growing food and eating it right from the garden or buying it at the supermarket, we are all impacted by the food we consume. Food directly influences our health, energy, family traditions, and our budgets. Learning about sustainable food systems helps us understand how our food choices impact our communities and the wider world, and allows us to make more effective and intentional decisions about what we eat.

Lesson

1

What Is Food?

Learning Objectives

At the end of this lesson you will be able to:

- Explain the process of photosynthesis.
- Classify foods as carbohydrates, proteins, or lipids.
- Draw a diagram of a photosynthetic food chain.

What You Need to Know

What is the first thing that comes to mind when someone asks you, “What is food?” Sometimes it is the last food that you ate, or you might say, “Food is what I eat to stay healthy.” Many people like to talk about food, share recipes, make food, watch cooking shows, and, of course, eat food! However, the meals we eat are just one example of food within the food system.

Encyclopaedia Britannica defines *food* as “material consisting essentially of protein, carbohydrate, and fat used in the body of an organism to sustain growth and vital processes, and to furnish energy.” In other words:

Food = Energy

The molecules in food are ***carbohydrates***, ***proteins***, ***lipids***, and ***nucleic acids***. These molecules are essential for organisms to synthesize and digest food.

ASSIGNMENT CHECKLIST

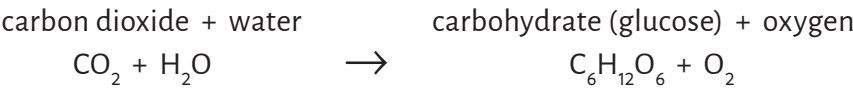
- ☐ Read “What You Need to Know.”
- ☐ Watch the two videos.
- ☐ Explain the process of photosynthesis.
- ☐ Classify foods as carbohydrates, proteins, or lipids.
- ☐ Find out about traditional foods in your family.
- ☐ Create a diagram of a photosynthetic food chain.
- ☐ Activity: Food Journal



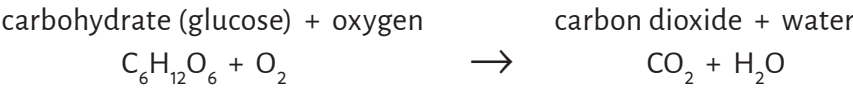
Fertile fields in Great Britain planted with cereal and rapeseed crops (Image credit: Pauline E)

Most organisms get their energy from the sun, either directly through **photosynthesis** or indirectly through a **photosynthetic food chain**. So, let’s review the process that allows all of us to get food.

Unlike humans, plants can make their own food through a process known as photosynthesis. Plants use light energy (photons) to combine carbon dioxide and water to make a carbohydrate called **glucose**. Oxygen is released into the atmosphere as part of this process. Glucose is the food! Plants use the energy from glucose to grow, reproduce, and sustain themselves. Here is one way to represent this process with a simplified equation:



When an animal, such as a human, rabbit, or cow, eats a plant, the animal’s cells get energy from glucose through the process of **cellular respiration**. In cellular respiration, oxygen is needed to break the chemical bonds in glucose (the carbohydrate). Breaking the bonds in that molecule is what releases the energy for the animals to use. Carbon dioxide and water are produced as a result of the cellular respiration process. Here is a way to represent this process with a simplified equation:



A **photosynthetic food chain** is a simple model that represents how food (energy) moves from one organism to another. Each organism is in a **trophic level**; this is the position that the organism occupies in the food chain.

SUN →	Green plant	Producer	autotroph	1st trophic level
	Animal (non-human)	Primary consumer	heterotroph	2nd trophic level
	Human	Secondary consumer	heterotroph	3rd trophic level

As always, the sun is at the beginning of any food chain.

Watch

Watch these two videos (click on the Foodways: Sustainable Food Systems tab at oakmeadow.com/curriculum-links/ for the online links):

Biological Molecules: You Are What You Eat

Photosynthesis and the Teeny Tiny Pigment Pancakes

The first video gives an overview of the chemical structures of carbohydrates, proteins, and lipids (fats). The second video explains how photosynthesis converts sunlight, carbon dioxide, and water into glucose (food). These short videos contain a lot of information so you may want to watch them more than once.

The videos in this course help explain the concepts students are working with. It may be helpful to watch the videos with your student, or to encourage the student to discuss different concepts with you. By explaining or talking about these ideas, students can gain a more complete understanding.



Think About It

Photosynthesis is an essential process upon which nearly all life on Earth depends. Explain the process of photosynthesis to someone else—a child, a friend, or an adult. Drawing a diagram might make your explanation easier to understand.

Discussion elements are included in this course to give students regular opportunities to think about, explain, and debate topics that are central to this course. Students are encouraged to discuss topics with a wide range of people: peers, family, professionals, and friends.

Assignments

1. List examples of carbohydrates, proteins, and lipids (fats) that you eat on a regular basis. (You may want to make your list after you complete Activity: Food Journal.)

Student answers will vary and may include some of the following:

Carbohydrates: bread, potatoes, pasta, rice, sugar

Proteins: meat, eggs, fish, beans, nuts, cheese

Lipids: oil, mayonnaise, butter, ice cream

2. Think about special meals you have shared with your family or friends. What are some of the things you ate? Ask your family members or friends the history of some of the special foods that were shared in the past. Were these foods they ate as children? Were the foods part of an ethnic

tradition or from a certain geographic region? Is there a special dish that has been prepared the same way for generations, or that has been changed a little bit with each generation? Write down what you learn.

This assignment asks students to learn more about foods that are important to their family’s culture and traditions. Answers should include specific details about ingredients and the family or cultural history of the food. Students will hopefully note whether favorite dishes have evolved over the generations or are still made in the traditional way. Many modern families find creative ways to substitute healthier options for certain traditional ingredients (such as using coconut oil instead of lard) or techniques (such as baking instead of deep frying). Some substitutions may be made on the basis of intentional dietary choices, such as making a traditional dish meat-free or gluten-free.

3. Create a labeled diagram of a photosynthetic food chain based on a meal you’ve recently eaten. Remember to title and label your diagram.

The diagram should begin with the sun, since all food chains begin with energy from the sun. The chain should include green plants (producers) at the 1st trophic level, non-human animals (primary consumers) at the 2nd trophic level, and humans (secondary consumers) at the 3rd trophic level. The diagram should be titled, correctly labeled and clearly convey the information.

Activity: Food Journal

This week, you will create a food journal. Note all the foods and beverages that you consume in three consecutive days, and measure or estimate the amounts (such as 2 eggs, 1 cup of chips, 8 ounces of milk). Try to be specific about the ingredients of each meal. For instance, if you have a smoothie, it might include yogurt, bananas, strawberries, and milk; if you have a pizza, it might include mushrooms and pepperoni (you don’t have to write down “tomato sauce” or “cheese” since those are regular pizza ingredients). Write down all meals, snacks, desserts, and drinks—everything you eat or drink goes on the list, even if it is a very small quantity. It is best to write things down as soon as you eat them rather than waiting until the end of the day to try to remember everything.

Keeping a food journal can be challenging but it is a revealing activity. The journal should include three full days of data, and show all meals, snacks, desserts, and drinks. Students are asked to estimate amounts and note individual ingredients when possible. Look for well-organized data presented in a format that is easy to understand.



Up for a Challenge?

Learn how to prepare a special dish or a family favorite. Write down the recipe (if it is not already written down) and ask an adult to help you make it or show you techniques you are unfamiliar with. Feel free to add your own flair to the dish and make it your own!

This is an optional activity (all Challenge activities are optional).

Challenge activities are always optional. Students who are interested in the topic or who wish to learn more are encouraged to try any of the challenge activities that appeal to them.

SHARE YOUR WORK

If you have any questions about the lesson assignments and activities, contact your teacher. You will share your work from this lesson at the end of lesson 2.

Lesson

2

The Food Web

Learning Objectives

At the end of this lesson you will be able to:

- Differentiate between autotrophic and heterotrophic organisms.
- Explain the soil food web.

What You Need to Know

The photosynthetic food chain, which we looked at in the previous lesson, explains how energy (food) moves from one organism to another. A food chain is a linear sequence in which one organism gets eaten by another.

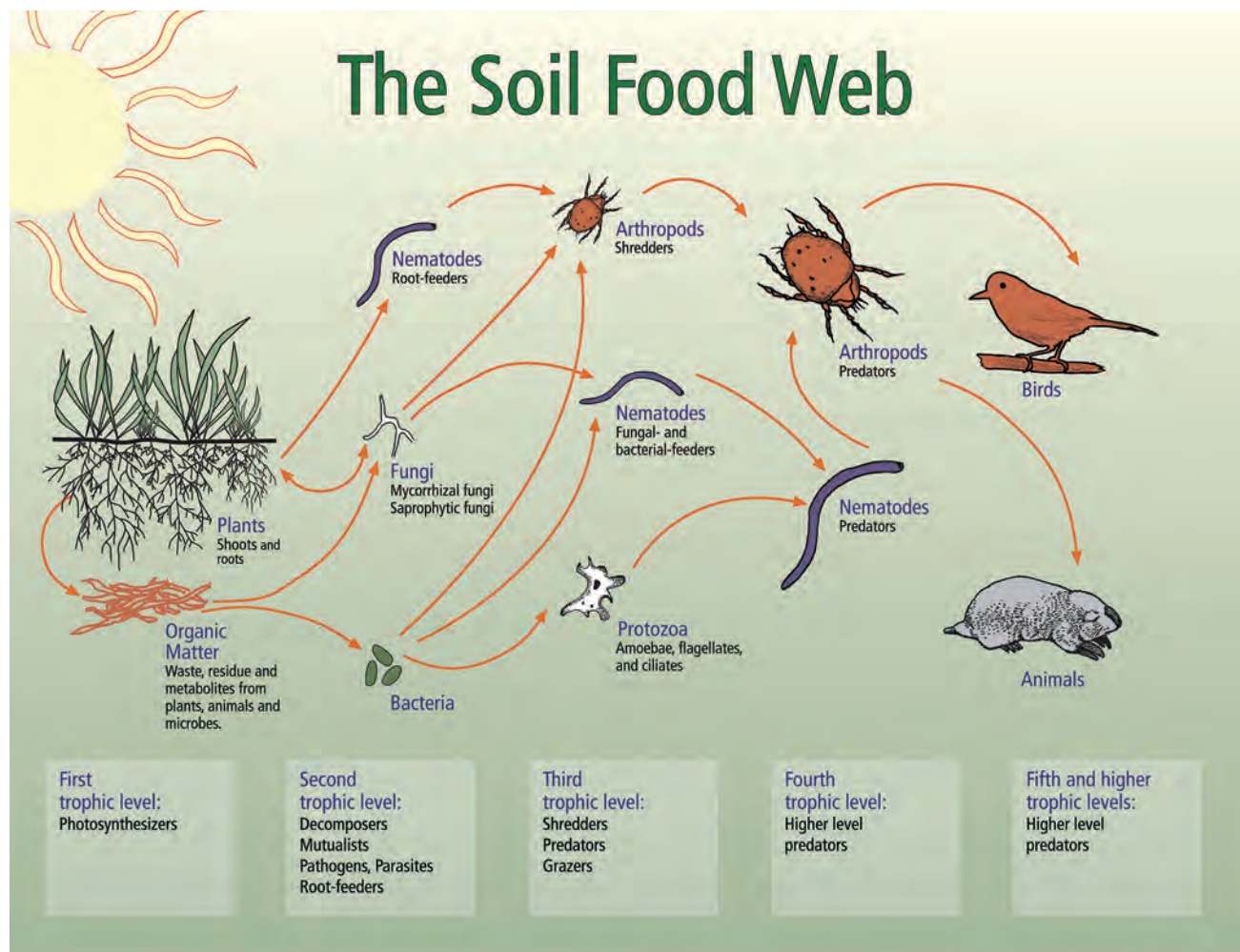
A **food web** is different. A food web, sometimes called a **food cycle**, is an interconnection of organisms within the food chain. A food web is usually represented by an image that shows these interconnections. Most organisms eat—and get eaten by—other organisms. A food web often shows what organisms consume for food and what consumes them. A food web combines several food chains together.

In a **soil food web**, we see the organisms that live below and above the soil. We see how they interconnect and feed off each other more than once. Some organisms in the food web are called **heterotrophic**, which means they consume carbon to grow and develop.

Heterotrophic species include **herbivores** (plant eaters), **carnivores** (meat eaters), **omnivores** (plant and meat eaters), and **scavengers** (foragers that feed on decaying plants and animals). Heterotrophic species rely on **autotrophic** species, which use photosynthesis to create food (organic compounds and oxygen). Plants, algae (such as seaweed), and some bacteria and fungi are autotrophs.

ASSIGNMENT CHECKLIST

- ☐ Read “What You Need to Know.”
- ☐ Watch the two videos.
- ☐ Read an article about the soil food web.
- ☐ Add information about heterotrophic and autotrophic organisms in your food chain diagram.
- ☐ Describe the soil food web.
- ☐ Choose a book to read and explain your choice.



Trophic relationships in the soil ecosystem are more multilayered than the photosynthetic food chain described in the previous lesson. (Image credit: *Soil Biology Primer*, Elaine R. Ingham/Nancy K. Marshall)

Read and Watch

Watch the following videos (see oakmeadow.com/curriculum-links/ for the online links):

What Is the Soil Food Web?

Autotrophs vs. Heterotrophs

Read this article from the National Resources Conservation Service:

“Soil Food Web”

Assignments

1. Return to the diagram of the food chain you created for the previous lesson. On the diagram, note which organisms are heterotrophic and which are autotrophic. For the heterotrophic organisms, label each one as herbivore, carnivore, omnivore, or scavenger.

For this assignment, students add to the food chain diagram they created in lesson 1. Heterotrophic organisms consume carbon to grow and develop; this category includes humans, animals, and microorganisms. Autotrophic organisms are ones that use photosynthesis to create food (plants). Each heterotrophic organism in the diagram should be labeled either herbivore (plant eater), carnivore (meat eater), omnivore (plant and meat eater), or scavenger (organisms that feed on decaying plants and animals).

2. Describe in your own words the soil food web. Explain how a healthy soil system works and then describe a scenario showing what might happen if one element is out of balance. Include specific details in your explanations.

The soil food web refers to the connection between organisms in the soil in their never-ending cycle of growth, development, and decay. Soil organisms break down organic matter (such as leaves and dead animals) to microscopic pieces, releasing nutrients into the soil. These nutrients feed plant growth, which in turn feeds animal growth. The organisms in the soil also provide other chemical components that make the soil rich, such as oxygen and space to make water accessible. The soil food web consists of organisms feeding and consuming one other to survive. If one element is out of balance, the whole system can break down. For instance, if there is inadequate water, the plants will fail to thrive so they will deliver fewer nutrients into the soil for soil organisms to decompose, so the soil will become less rich. If a pesticide is used to harm one particular soil organism, that organism's link in the chain is broken, and the cycle is disrupted. The main point that students should note is that all parts of the system are interrelated and interdependent.

3. Choose one of the following books to read (check with your teacher if you'd like to read an alternate selection). Each one gives a different perspective on how the food system works.
 - *The Color of Food: Stories of Race, Resilience and Farming* by Natasha Bowens
 - *One Straw Revolution* by Masanobu Fukuoka
 - *Eating the Landscape: American Indian Stories of Food, Identity, and Resilience* by Enrique Salmón
 - *Stuffed and Starved: The Hidden Battle of the World Food System* by Raj Patel
 - *Omnivore's Dilemma* by Michael Pollan
 - *Blessing the Hand that Feeds Us: What Eating Closer to Home Can Teach Us About Food, Community, and Our Place on Earth* by Vicki Robin
 - *Animal, Vegetable, Miracle* by Barbara Kingsolver
 - *Consumed: Food for a Finite Planet* by Sarah Elton
 - *Food and the City: Urban Agriculture and the New Food Revolution* by Jennifer Cockrall-King

- *The 100 Mile Diet: A Year of Local Eating* by Alisa Smith and J.B. MacKinnon
- *Botany of Desire* by Michael Pollan
- *Real Food, Fake Food* by Larry Olmsted
- *Farm City* by Novella Carpenter
- *Epitaph for A Peach* by David Mas Masumoto
- *Deeply Rooted: Unconventional Farmers in the Age of Agribusiness* by Lisa Hamilton

Look up the description of each book online or in the library and consider each one before you make your decision. Choose your book this week and explain why you chose it.

A 500-word essay on your book selection will be due at the end of lesson 11/12; a rough draft of your essay will be submitted with lesson 8. You should acquire the book as soon as possible, and then, based on the book length, create a reading schedule that allows you to finish the book in four weeks—this will give you two weeks to write your rough draft.

Use the following prompts to frame your essay:

- What is the main topic or theme of the book? What do you think is the author's main message or purpose in writing it?
- Does the author have experience or expertise related to the book's topic?
- What information in the book did you find surprising or particularly interesting?
- What are some of the questions raised by the book? Do you have any questions based on the reading?
- While reading, take note of any passages that intrigue you or capture your attention. Use one or more of these passages in your essay. Include a page number and citation.

These guidelines are not meant to be followed step by step; they are to help you focus on the key ideas in the book so that your essay can convey these ideas effectively.

Students will consider each of the book choices. The chosen book should be acquired as soon as possible from a library or bookseller. Students should note which book was chosen and why.

SHARE YOUR WORK

If you have any questions about the lesson assignments and activities, contact your teacher. When you have completed this lesson, please share the following work with your Oak Meadow teacher. Communicate with your teacher if you are unsure how to share your work.

Lesson 1

- List of foods that provide carbohydrates, proteins, or lipids
- Description of traditional foods in your family
- Copy of your three-day food journal

Lesson 2

- Labeled diagram of a photosynthetic food chain with information about heterotrophic and autotrophic organisms
- Description of a soil food web
- Book choice and reason for choosing it

Lesson

6

Agricultural Methods

Learning Objectives

At the end of this lesson you will be able to:

- Explain different agricultural methods and the benefits of each.
- Identify possible advantages and disadvantages of genetically modified food.
- Report on the products and agricultural methods of a local farm.

ASSIGNMENT CHECKLIST

- ☐ Read “What You Need to Know.”
- ☐ Watch three videos.
- ☐ Draw or describe a “future food.”
- ☐ Learn about a local farm.

What You Need to Know

Agriculture is the science and practice of farming, which is the domestication of plants and animals. Historically, the methods of farming varied per location due to climate, topography, and knowledge being learned, shared, and passed down from generation to generation.

There are many different agricultural methods for each step of the farming process: how the land is tilled and planted, how the plants are spaced, how the soil is amended, and other aspects designed to ensure a healthy crop. From early times, indigenous communities practiced an agricultural method that periodically burned fields. This practice was done in large fields, especially in forest-like landscapes. This **controlled burn** land management method helped clear an area of the forest or open land to encourage new growth. The ashes of the burned plants or trees were used as fertilizer. After the controlled burn, the land was left to rest and then new crops would emerge or were planted. One drawback of a controlled burn is that it releases smoke and ash into the air; another drawback is that a controlled burn can become out of control, spreading to other areas.

When crop cultivation began, seeds were often **broadcast** or tossed over an area to grow in a scattered pattern with little waste of space. This was especially common before the advent of farm machinery.

The most common agricultural method today is to plant seeds in parallel rows. **Row planting** is often done to allow machinery to pass between rows for easy cultivation and harvest. Planting in rows—either by hand or by machine—allows easier weeding and harvesting. Row planting works well for



Row crop growing in California (Image credit: USDA Natural Resources Conservation Service)



Corn is grown between walnut trees in this example of agroforestry. (Image credit: USDA National Agroforestry Center)



Radishes and carrots are seeded in a companion planting that benefits both. (Image credit: VitaminGreen)

annual crops, plants that only survive for one growing season and are replanted each year.

Row crops are usually seen on large farms that produce huge quantities of a single crop (called a **mono-crop**). Most of the food available in stores was grown as mono-crops planted in rows. One benefit of row crops is that a large field can be maintained by a single farmer. One disadvantage of row planting is that it takes up more space since paths between the rows of plants need to be large enough for a person or machine; this means fewer plants can be grown (and harvested) than by a more intensive growing method.

Agroforestry is an agricultural method that integrates trees into crop and animal farming. This can be used for **perennial crops**, trees and shrubs that produce fruit each year and keep growing, such as apples and nuts. Agroforestry is often used to provide shade and food for grazing animals, to grow crops between trees as they are maturing, to grow crops that need shade, and to lend structural integrity to the soil to prevent erosion.

An agricultural method that is popular with many small farming operations as well as backyard gardeners is called **companion planting**. This method takes advantage of the fact that some plants grow particularly well next to each other. Certain plants add or consume specific nutrients, and if another plant needs or provides those nutrients, the plants will be beneficial companions. Some plants deter insects or animals that might harm other plants. An example of companion planting is the pairing of basil and tomatoes. In the soil, there are grubs called nematodes that enjoy eating the roots of the tomato plants. Basil has a strong scent that many humans enjoy, but it repels the nematodes. The presence of basil will make

the nematodes leave the area, allowing the tomato plants to thrive. Companion planting is mostly used in backyard gardens and small farms because when there are different plants in one small area, the plants must be cultivated and harvested by hand instead of using machinery. This makes it impractical for larger farming operations.

Organic farming, which you researched in the previous lesson, can be used with any of the above methods. **Non-GMO** is another term often found linked to organic farming, although it can apply to conventional farming as well. GMO stands for **genetically modified organism**. Scientists have found many ways to alter the genetic material of a plant or animal to create certain results. For instance, soybeans, sugar beets, and corn have been modified to resist herbicides, which allows farmers to use weed killers without harming the crop. Other plants have been genetically modified to be pest-resistant. Foods labeled “non-GMO” have been produced without genetic modifications. While not an agricultural method, it is an agricultural choice each farmer makes: whether or not to use genetically modified seeds or animals.

As long as humans have been cultivating crops and domesticating animals, they have been doing **selective breeding** or **artificial selection**. This means breeding plants and animals for desired traits, such as drought resistance or height. Rather than manipulating the genetic composition of a seed in a laboratory, selective breeding allows farmers to naturally produce crops for different purposes. Consider, for instance, the many different types of citrus fruits. Oranges meant for peeling and eating were bred to be seedless and have skins that easily peeled. Tangerines were bred to be smaller and sweeter than oranges, and very easy to peel. Blood oranges are a variety with a deep red color on the inside. Meyer lemons are a cross between a lemon and an orange, so they are sweeter than other lemons. Selective breeding is also seen in the different types of animals used for meat, milk, and fibers.

Read and Watch

Watch the following videos (see oakmeadow.com/curriculum-links/ for all online resources):

Summer on the Farm

What is Agroforestry?

Why Are GMOs Bad?



Think About It

Sometimes we form opinions without having much information; often, as we learn more, we alter our opinions based on new information. For instance, did you already have an opinion about genetically modified and non-GMO foods before you read this lesson and watched the video about it? Has your opinion changed based on what you’ve learned? Discuss your ideas with someone else. If possible, watch the video together and discuss the ideas it presents.

Assignments

1. Choose a food you like to eat and imagine how it has changed over time. Now, pretend you are a scientist or farmer who wants to improve this food. What would you change about it? For instance, you might want to make it larger, or more easily harvested, or shaped in a way that makes it easy to ship. Can you think of another food that has qualities you'd like to incorporate into it? Draw or describe your vision of this "future food." Explain what you'd like to change and why, and then describe how this might be done. Be as detailed and technical in your plans as possible. Include an explanation of the benefits as well as potential disadvantages of your new future food.

This creative assignment asks students to imagine how they would like to adapt a favorite food. The response does not need to be scientifically possible at this time—imaginative envisioning is encouraged! Look for a drawing or description that is detailed, and that shows a logical train of thought between the purpose for the adaptation and the proposed method.

2. Find a local farm—this might be an urban, suburban, or rural farm—and find out what they produce, and which farming methods they use. Is it an organic farm? Is the planting, weeding, and harvesting done by hand, by machine, or a combination of the two? How are crops prepared and transported from the farm to the consumers? Note which crops are annual, biennial (fruit every two years), and perennial. Don't just rely on information on the farm's website or brochure, call the farm with your questions ready. If possible, visit the farm in person to meet the farmers and see the operation firsthand. Share what you've learned using a combination of text and visuals (such as photographs, charts, diagrams, or sketches).

For this assignment, students are encouraged to visit a local farm. If this is not possible, they are asked to contact a local farmer to gather information. Students should be able to learn what is grown and the types of farming methods used. They should also be able to categorize the crops as annual, biennial, or perennial. Relevant visuals should be included with the written information. An important part of this assignment is having the student make personal contact with a local farmer, so facilitate this contact, if possible.



Up for a Challenge?

Watch the following video:

The Great Laws of Nature: Indigenous Organic Agriculture Documentary

Describe how the Muskoday organic cooperative farm integrates human and agricultural systems. Include an explanation of food sovereignty and food security.

SHARE YOUR WORK

When you have completed this lesson, please share the following work with your Oak Meadow teacher.

Lesson 5

- Food systems diagram
- Essay on sustainable farming practices
- Photo or description of your living sculpture

Lesson 6

- Drawing or description of “future food”
- Information about a local farm

Lesson

14

Becoming Part of a Sustainable Food System

Learning Objectives

At the end of this lesson you will be able to:

- Identify a need in the local food system or community.
- Create a plan to contribute to the local food system.
- Enlist the help of others for your project.

ASSIGNMENT CHECKLIST

- ☐ Read “What You Need to Know.”
- ☐ Watch an informational video.
- ☐ Create a project plan for your community service learning.

What You Need to Know

We are five weeks away from finishing this course! It’s time to begin planning for your final project. You have two options:

- Option 1.** Do some community service learning or volunteering at a local farm for 10–15 hours over the course of two or three weeks. This work might include planting, weeding, harvesting, feeding and caring for animals, or any number of odd jobs around the farm. You will keep a journal of your time on the farm, recording not only your practical experiences but also the impact of your farm experiences in terms of your own personal life and your community involvement. If possible, include photos to help document your time on the farm.
- Option 2.** Create something that helps promote a local farm, community garden, farmers market, food pantry, or some other organization that is involved in promoting access to healthy food. You might choose a farm or garden organization and collaborate with them to create a pamphlet, website, poster, or farm stand signage. You might organize an informational meeting where community members can meet farmers and other food producers and learn about their products. You might create a display or presentation for your public library or develop a public service announcement for your local radio station or public access television. You might create a learning unit for an elementary school classroom that teaches about healthy food—where it comes from and how to incorporate it into a daily diet—and share your lesson plans and activities with one or more local teachers.

This week, you’ll decide what your final project will be and begin planning by contacting people that you’ll need to coordinate with.

Read and Watch

Watch the following video (see oakmeadow.com/curriculum-links/):

Stages of Service Learning



Think About It

As you are thinking about what your final project might be, try to be realistic about your resources, time, and abilities. Will you need someone to give you a ride to and from the farm? Will you need help organizing meetings, doing research, or gathering supplies? Enlist help from others—you aren't expected to do everything on your own. This project will be a community effort. Discuss your ideas and brainstorm with others before you settle on your final decision.

Assignments

1. Complete the following steps to create a project plan.

Students are likely to need guidance and support with both the planning and implementation of their projects. Their responses to the assignments below will help indicate where support is needed. Encourage your student to discuss and brainstorm the project practicalities before beginning the work. Project parameters are often refined and modified during the planning stages to make the project more manageable and successful.

- a. Write a brief description of your project. What will you do? Who will benefit? How will this help support the local food system?
- b. **If you are volunteering on a farm:** Coordinate with a local farm that would like help. You will need to find a farm that is nearby, and make sure it is one that is suitable for you. For instance, if you are allergic to bee stings, you might want to avoid a farm that raises bees. You will need to check that the farmer is open to volunteer help, and is able to work within your schedule and abilities. You will need appropriate work clothes and shoes. Will you need to provide your own lunch and water? Will you need to reschedule other activities to clear your schedule for farm work? What will you do if it rains? Determine a schedule that will work for you, and coordinate with the farm about what you will be doing and when. Write down your plan.
- c. **If you are creating something to promote local food:** Make a plan for carrying out your project. What will you need to do first? Are there materials you need to assemble? Can you get them donated? Are there steps that need to happen before other tasks can be done? Are some steps of the process time-sensitive? If you are planning an event, when will it take place? Where? It is useful to talk over your planning steps with others because they can help you come up with

questions that need to be answered while the project is still in the planning stages. Write down each step of the process in as much detail as possible, noting how long each step will take and who will be responsible.

- d. Make a list of people you may need to contact for help or to coordinate efforts. Write down what you plan to ask of each person, and include contact information so you have it all in one place. Write everything down on paper or the computer—don't try to keep everything in your head! Remember, help may include transportation or scheduling that you have to coordinate with others.



Up for a Challenge?

Would you like to keep a video log of your community service learning project? If so, start recording at the beginning and build video sessions into your project planning. You'll also need to set aside time at the end to edit the video in order to share it with others.

SHARE YOUR WORK

When you have completed this lesson, please share the following work with your Oak Meadow teacher.

Lesson 13

- Thoughts on the video *Seeds of our Ancestors, Seeds of Life*
- Summary or creative form describing food justice work done by an organization
- Activity promoting food justice

Lesson 14

- Your project plans for your community service learning (volunteering or promoting local food)



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