

# FOOD SUPPLIES

GRADE 4

UNIT 3

LESSON 8

**QUESTION** Do we need the land now as much as we used to for our food?

**CONTENT OBJECTIVES** Compare food supplies and choices from the past to the present. Understand how land is used and how people work together to supply us with food and water. *(Students must complete most of the activities in this lesson to meet the stated objectives.)*

**LIFE SKILL OBJECTIVES** Critical thinking, cooperation, healthy lifestyle choices

**STANDARDS AND BENCHMARKS** **SOCIAL STUDIES**

Compare ways in which people from different cultures or eras think about and deal with their physical environments and social conditions.

Compare similarities and differences in the ways groups, societies, and cultures meet human needs and concerns.

Use maps to locate food sources in Iowa.

Identify and use various sources to reconstruct the past.

Identify and describe examples in which science and technology have changed the lives of people and their food supplies.

Discover Iowa's major agricultural products.

Compare and contrast pioneer life to present day life.

Explain how various people cooperate to produce goods and perform services for our food supply.

**LANGUAGE ARTS**

Demonstrate good listening skills by accurately following oral directions, answering questions based on completed activities or oral presentations, and integrating responses by comparing, contrasting, and drawing conclusions.

Infer ideas from printed materials.

Use a variety of reading resources to acquire information.

Write appropriately for specific purposes and audiences.

Organize information and ideas sequentially.

Speak in discussions.

Prepare and deliver written and oral presentations.

STANDARDS AND BENCHMARKS CONTINUED ON NEXT PAGE . . .



**STANDARDS  
AND  
BENCHMARKS  
continued**

**HEALTH**

Describe the relationships between personal health behaviors and individual well-being.  
Describe how physical, social, and emotional environments influence personal health.  
Describe ways technology can influence personal health.  
Make healthy food choices based on the USDA Food Guide Pyramid.  
Describe the historical relationship between activity or exercise and fat content of food.  
Use food safety measures while preparing and eating foods.

**INDICATORS**

Work together cooperatively to prepare food. Develop a food chain tracing foods back to the land. Make written and verbal comparisons of food supplies and choices.

**NOTES**

## ACTIVITY 1 | APPLE BEE

**60 minutes**

**MATERIALS** Ingredients and equipment for the applesauce, butter, and biscuits recipes (from pages 178-180)  
Small paper plates and napkins (*one per student*)

**Teacher’s Note:** You may want to invite parents or community members to help with this lesson and be part of your “bee.”

Arrange to have the students visit a local apple orchard the day before this lesson. Pick apples at the orchard for your classroom apple bee. If it is not possible to visit an orchard and pick apples, purchase one apple per student at the grocery store and hide the apples in the classroom before the students arrive. After the students enter the classroom, have them hunt for the hidden apples. Gather the apples in a large basket or mixing bowl.

Macintosh, Jonathon, Golden Delicious, and Rome Beauty varieties are good choices for preparing and cooking applesauce. Locally grown varieties would also be an excellent choice.

If you are a participating in the Iowa EFNEP program, you may want to refer to the EFNEP Connections in the Optional Activities section of this lesson.

### Do

**Let’s have an apple bee. Does anyone know what that is or was?**

An apple bee was a special time during the harvest season for settlers all over the country. A family would invite neighbors to help peel and core most of the apple crop to make applesauce and apple butter. After the work was done, everyone would gather and have a big feast to celebrate.

Before we handle food, it is important to follow correct safety and sanitation procedures. Washing hands with hot soapy water is a very important step to prevent the spread of germs and bacteria. *Wash your hands first to set the example, then have the students wash their hands and return to their seats. While they wash their hands, gather your ingredients and supplies.*

Safety tips for the apple bee:

1. *Make sure students work with adult supervision.*
2. If your hair is long, tie it back so it won’t fall into the food or catch on fire.
3. Make sure all utensils and surfaces are clean.
4. Make sure that perishable ingredients have been stored in a cold place.
5. To avoid spilling hot liquid on yourself and others, turn pot handles away from the edge of the stove or hot plate.
6. Be careful when using plastic knives to cut the apples. Cut the apples on a cutting board with the knife going away from you. Keep your fingers out of the way.

Do  
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## APPLESAUCE

*Settlers turned apples and many other fruits and vegetables into sauces or spreads for use on different breads.*

### Equipment

Plastic knives (enough to share between four or five students)	Wooden spoon
Cutting boards (enough to share between four or five students)	Colander, sieve, or strainer
Heavy 2-quart saucepan with a hot plate or camping stove; or an electric skillet	Oven mitts
Liquid measuring cup	Cake pan or large bowl
Dry measuring cups	2 kitchen towels
	Serving bowl
	Serving spoon

### Ingredients

5 pounds ripe apples (or one apple for each student)	3 cups water
	1½ cups sugar

### Directions

1. The students should wash their own apples.
2. Have each student cut his or her apple in quarters, then cut out the core. They should remove any bruised or bad spots. Remind them not to peel the apples.
3. Put the apples in the saucepan or electric skillet. Have one student measure and add the water, then cook the apples at 325°F in the electric skillet. Everyone can take a turn stirring the apples. This helps them cook evenly throughout and prevents the apples from sticking.
4. When the apples are thoroughly soft, an adult should pour the hot apples into a colander or strainer over a large bowl or cake pan.
5. Everyone can take one turn using the wooden spoon to press the apples through the strainer, sieve, or colander. The apple skins will remain in the sieve.
6. One student can measure and add the sugar. Another student can stir it in while the sauce is still hot so the sugar dissolves.
7. Allow the applesauce to cool before serving. Serve it with the rest of the food from the bee.

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## BUTTER

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### Equipment

1 quart glass jar with lid  
Liquid measuring cup  
Tablespoon that fits into the mouth of the jar  
Butter plate  
Clean tea towel or cotton handkerchief

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### Ingredient

2 cups pasteurized whipping cream

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### Directions

1. One student can measure and pour the cream into the jar and screw on the lid.
2. Pass the jar around the room so everyone can shake it. Have the students try to shake it almost continuously. Each student should count to 10 while shaking the jar, then pass it on to the next person.
3. Using the tablespoon, remove the solid lump of butter from the jar and wrap it in a tea towel or a cotton handkerchief.
4. While holding the handkerchief above the jar opening, have one or two students squeeze the towel down around the butter to remove the liquid.
5. Have someone with clean hands press the butter into a shape and put it on the butter plate.
6. Set the butter in the refrigerator or cooler to chill and harden.

Settlers drank the remaining buttermilk or they used it in cooking.

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## BISCUITS

*Makes 24 biscuits*

### Equipment

Large mixing bowl	Wax paper
Measuring cups	Rolling pin
Measuring spoons	Biscuit cutter or juice glass
Wooden spoon or large metal spoon	Baking sheet
Pastry blender (or fork)	

### Ingredients

4 cups all-purpose flour	½ cup plus 2 Tablespoons lard (or shortening)
2 Tablespoons baking powder	1 1/3 cups milk
1 teaspoon salt	

### Directions

1. Preheat the oven to 450°F. (Or take the biscuits to the school kitchen for the cooks to bake.)
2. Have students take turns measuring the flour, baking powder, and salt into the large bowl.
3. Ask another student to gently stir the dry ingredients with the spoon.
4. One student can measure the lard and add it to the dry ingredients.
5. Students can take turns cutting the lard into the dry ingredients using a pastry blender or a fork. Continue until the mixture looks like coarse corn meal or tiny peas.
6. Another student can add the right amount of milk.
7. Someone else can stir the mixture until the dough forms into a ball.
8. Clean a tabletop and place a large piece of wax paper over the surface. Lightly cover the wax paper with flour.
9. Place the dough on the flour and knead it gently by folding it from the top down and pushing it away from you with the palm of your hand. Knead approximately 10 times.
10. Roll or pat out the dough so it is ½ inch thick. (You could make drop biscuits using a teaspoonful of dough and dropping it on the baking sheet.)
11. Cut the dough with a biscuit cutter or juice glass dipped in flour.
12. Place the biscuits on an ungreased baking sheet.
13. Bake 10 to 12 minutes or until evenly brown.
14. Serve warm with butter and applesauce.

Sit, eat, enjoy! You may want to serve water to drink with the snack.

## REFLECT

**How is your feast on a biscuit?****What part of your feast do you like best?****Does it taste the best when you combine all of the foods you made into one bite?**

We are so used to eating foods highly flavored with herbs, spices, sugar, and salt that pioneer foods may taste a bit flat.

**Why did the settlers have apple bees?**

Many settlers brought apple seeds with them to plant after they settled on their new farms. In fact, Iowa became a top-ranking apple producing state by the early 1900s. It took several years for the trees to grow and produce apples. But when they were in full production, it took a lot of effort to pick the apples, wash them, peel them by hand or with a small paring machine, and cook them. An entire family and several neighbors would work together to get the job done in a day. Then they would eat a big feast to celebrate.

**What are some other “bees” you might have heard of?**

Too bad spelling bees are no longer associated with big feasts! Settlers had corn husking, sheep shearing, threshing, and quilting bees.

**Why would they have these kinds of “bees?”**

There were no machines to help harvest, process food, or make quilts. They depended on extra help to get crops harvested before they spoiled, the weather changed, or winter set in. Neighbors pitched in to make the work go faster. They had fun working together and they had a goal. They knew when they were done they could enjoy a big celebration together. Besides lots of food, bees often included singing and dancing.

**What is a threshing bee?**

Read “Threshing” and look at the pictures on pages 58 and 59 of *Once Upon a Farm* by Bob Artley. The women would sometimes spend two days preparing food for the threshing crew. Huge platters of chicken, beef and gravy, potatoes, vegetables, homemade pickles, breads, apple pies, chocolate cakes, and rice pudding were part of the menu.

**Why would you call a bee, or the recipes you just prepared, a lesson in cooperation and celebration?**

First, you had to cooperate with everyone to make each of the recipes. Then you could celebrate that cooperation by sampling the great food. The settlers had to cooperate with each other to harvest the apples and prepare them for storage. Then they celebrated what they had done.

**What are some ways you had to cooperate to make the food?**

Washing to assure cleanliness, taking turns, assigning different duties, helping each other complete a task, allowing another person to complete his or her part of the task before your turn, following instructions so the food would turn out OK, having fun accomplishing a common task, etc.

**Did the settlers have to do the same things?** Yes.

**What do you think the settlers did with the apples that were not processed or made into applesauce, apple butter, jelly, jam, and cider?**

Some were dried. Many were eaten raw. The children took apples in their school lunch pails and ate them or traded them with friends. Apples were stored in cool, underground cellars. A special heritage recipe from the *Living History Farms: Harvest of Favorite Recipes* says in order to keep apples fresh for a year, layer them with dry sand in a dry barrel until it is full. Then you cover the barrel and store it where it won't freeze during the winter.

## REFLECT

CONTINUED

**Do you think breads were a common part of a “bee?”**

**What kinds of breads might have been served at a “bee?”**

Almost any kind you can think of: corn bread, muffins sweetened with fruit, flat breads, salt-rising bread, loaf breads, or rolls. Usually the breads were not very sweet. Pioneers covered them with molasses (from sorghum), honey (from bees), syrup (from maple trees), applesauce or apple butter, or just homemade butter.

**What convenience products are available today to make biscuits?**

There are dry biscuit mixes, tube biscuits, biscuits to heat and eat, and biscuits already made into breakfast sandwiches at fast-food places.

**Do you remember what Addie’s mom did in *Addie Across the Prairie* to make money on the farm after the flood?**

She made butter and took it to Montezuma, Iowa, to sell.

*Show the pictures and read the captions about butter making on pages 54 and 55 in Once Upon a Farm by Bob Artley. Note how the entire family worked together to make the butter. The first U.S. creamery was built in 1871 in Iowa. This commercial facility helped decrease the labor involved in churning butter.*

**What did the pioneers use to make the foods for the apple bee?**

Apples, sugar, grain, milk

**Where did they come from?**

They grew on the land or were from animals that ate grass or grain off the land.

**Where do applesauce, butter, and biscuits come from today?**

You might find them in the grocery store, but they all started from the land.

**How does butter and milk come from the land?**

Dairy cows eat grass or grain that grows on the land, then they produce milk that is made into hundreds of products such as butter.

**Did you drink water with your biscuit?**

**Where did the water come from?**

Originally it came from precipitation in the sky. But it was captured on the ground. So your water also came from the land.

**What would happen to life on Earth if quality drinking water or no water were available?**

There would not be life on Earth. Plants, animals, and people all need water to survive.

**Did you know that you should drink at least eight glasses of water every day?**

## APPLY

Make a list of ways people celebrate by having big meals together. Families and friends often have big meals to celebrate holidays such as Thanksgiving, Christmas, Easter, and July 4<sup>th</sup>, and events such as weddings, graduations, etc. Big meals often are a part of school, church, or community celebrations and fund-raisers, or when projects are completed.

Discuss how food was prepared or brought to special meals the students remember. Perhaps the food was catered or purchased from a restaurant. Maybe everyone brought, made, or purchased something. Perhaps grandma or someone else made the entire meal. Maybe everyone met at a restaurant to be served a big feast.

# ACTIVITY 2 | WHICH WAY TO THE STORE?

60 minutes

**MATERIALS** *AgTimes* magazines (one per student, found in the *Where We Live* kit)  
 48 large, white paper plates (to draw on)  
 Crayons  
 String  
 Single hole punch  
*Iowa: Living in Harmony* banner (found in the *Where We Live* kit)

## INTRODUCTION

Distribute the *AgTimes* magazines. Ask the students to find the plate picture with the two breakfast questions on it and have them write their answers next to the questions. Discuss some of their answers.

Then have them turn to “U.S. Agriculture – Then and NOW!” and complete the matching activity. Go over the answers together.

Finally, ask them to read “Lean Machine” and “Gobble It Up.”

**What is the difference in fat content of animals from the early 1900s and animals today?**

Livestock today have a lot less fat than they used to.

**Why was the fat content changed?**

People need and want less fat now.

**Can we still hunt wild turkeys in Iowa?**

Yes.

**Do you think they would be similar to the wild turkeys found by early settlers?**

Yes, depending on what the turkeys eat.

**What kind of turkey, chicken, beef, pork, and lamb products are available now that weren’t available in the early 1900s?**

Deli-sliced meats, ground meats, batter-dipped meats, many convenience items

**What do these activities have in common?**

They compare our food supplies from the past to now. There are differences in what was and is available; how it is grown, harvested, processed, and distributed; and what people want to eat. The activities you just completed may help you complete the next activity, *Which Way to the Store?*

## Do

Divide the students into the four teams listed below and give each team a dozen paper plates and crayons.

Native Americans before the 1800s  
 Pioneers during the 1800s

Farmers since the 1900s  
 Consumers now

Write the following menu on the board.

————— **LUNCH** —————  
 Turkey Sandwich / Berries / Milk or Water

## DO CONTINUED

You are an Iowa family described by the name and time period of your team. The cool autumn days and your many activities make you hungry. Your family is anxious to eat lunch. The menu is written on the board. Your team or family needs to discuss where it is going to find turkey, bread, berries, and milk. Then you need to talk about how you will prepare the meal. Decide who will be responsible for each step, how long it might take you, and what tools you will need. The *Iowa: Living in Harmony* timeline banner may help you remember what was available and how it was prepared for your assigned time period.

Once you've thought through finding and making your lunch, draw and color pictures on the paper plates that trace the steps needed to obtain lunch. You only have 12 plates to tell the entire story. You'll need to figure what you want to draw on each plate. Use the guidelines on the board (*see below*) to help you with your decisions. After you are done drawing on each plate, arrange them in order of the steps used to harvest, prepare, and eat the lunch. Then punch holes in the top and bottom of each plate. Using string, tie the first plate to the second plate, making a chain. The bottom plate on the chain should be the picture of the lunch or finished product. When each team is finished, you will explain your lunch plans to the rest of the class. *On the board, write the following guidelines for drawing on the plates.*

### GUIDELINES

Be sure to include pictures of these things somewhere on your chain of plates.

1. Pictures of the animals, crops, and plants the lunch items come from
2. Pictures of the places the lunch items probably come from
3. Pictures of the tools used to hunt, harvest, process, prepare, or buy the food
4. Pictures of the final product (lunch)

## REFLECT

*The teams should report to the class who they were and what they had to do before they could eat their lunches. The following four paragraphs provide follow-up discussion information.*

Native Americans in Iowa usually lived near a water supply such as a river or a lake. They hunted and gathered food from nature. Animals and plants such as elk, deer, moose, bear, beavers, squirrels, rabbits, turkeys, pheasants, nuts, berries, fruits, and mushrooms were an important part of the food supply. In the wetlands, ducks and frogs were hunted. Fish were caught from rivers, lakes, and creeks. Prairie chickens, bison, and elk were hunted on the prairie, where Native Americans also gathered dandelions, flowers, corn, and roots. Native Americans used rocks, wood, and clay tools. *See page 11 in Iowa – Portrait of the Land for pictures.* If they wanted to preserve meat for later use, they hung it over wooden racks to dry and cure. It looked and tasted like jerky. The women planted and harvested corn, which they ground before it was made into flat bread.

Pioneers arriving in Iowa in the 1800s brought a lot of their own food. They also hunted and trapped animals, and gathered berries. The Iowa land was still home for abundant plant and animal wildlife. The pioneers brought along cows, chickens, pigs, and sheep for food and fiber, and horses, mules, and oxen to help work the land. Pioneers grew crops of wheat, oats, potatoes, squash, corn, and beans. Pioneer women spent most of their time growing, preserving, and preparing food to feed their families. This is how most of the food was used. Some items were traded or sold to get flour, sugar, spices, tools, cooking equipment, and other supplies. The pioneers brought many metal tools with them.

## REFLECT

CONTINUED

In the 1900s, farmers began producing large quantities of grain and meat products to feed the world. This continues today. In 2000, Iowa ranked as a top production state for corn, soybean, pork, eggs, beef, turkey, and sheep. Milk production is an important part of Iowa's agricultural activities, especially in northeast Iowa. Farmers also raise elk, bison, ostrich, and emu to feed people. Iowa farmers grow berries, grapes, apples, and a variety of vegetables on their farms and sell them to stores and at farmers' markets. Iowans consume 10 percent of the agricultural products grown here. The other 90 percent leave the state. (We don't grow enough fruits and vegetables to supply our statewide needs, so the majority of our fruits and vegetables are imported.) Processing plants use large equipment and food quality systems to take raw agricultural products and turn them into food for people. A complex distribution and marketing system gets the food to stores. Farm families in the early 1900s grew most of their own food and processed much of it themselves. During the last 50 years, more and more families have quit growing and processing their own food. Farmers generally use large equipment because of the large number of acres they plant and harvest and the number of livestock they have to feed.

Most of us relate to our food supply as consumers. We go to a store or a restaurant regularly to find our food. It is a lot quicker to fix lunch that way. We don't know much about the steps it takes for our food to get there. We generally don't think about how our food comes from the land because the only land we think about before lunch is the distance we have to travel across it to get to our prepared food. Many people purchase food at a local farmer's market or through a CSA (Community Supported Agriculture) cooperative. When people belong to a CSA, they contract with a local grower who provides them fresh produce on a regular basis throughout a growing season. When consumers buy directly from growers, they make a closer connection to the land by knowing where their food was grown and who grew it. Gardening is the number one leisure activity in the United States. Although many gardeners are not growing fruits, vegetables, or grains, gardening is the closest many consumers get to growing their own food and understanding the connection to the land.

Don't forget water. Today, a drink of water is never far away. You might find a drinking fountain just around the corner from your classroom. We take for granted that the water we drink and use will always be clean and safe.

### **Where do we get our drinking water in Iowa today?**

We get our drinking water from rivers and underground aquifers. It is made safe to drink by people and equipment that we don't generally see.

**Do you remember where Addie's new neighbors in *Addie on the Prairie* were going to get their drinking water? Hint: Addie was supposed to stay away from the water source, but she hid there to get away from the prairie fire.**

Addie's neighbors went to a deep well. Most people living in the country still have to dig their own wells unless they can hook up with city water supplies and services.

### **Where did the Native Americans and the pioneers get their water?**

They got their water from rivers or streams. They usually located their homes near a water source. They might have had to boil the water to make it drinkable.

### **What could have been in their water?**

Animal manure, insects, decayed plant and animal materials, soil, minerals

### **What can people do to preserve and maintain our quality water supply?**

Conservation, don't waste water, don't pollute, prevent runoff from fields, etc.

**What is the main difference in the way we currently obtain our food supply compared to the past?** Most people purchase their food at a grocery store or a restaurant. We don't have to hunt, gather, harvest, preserve, and prepare our food.

## REFLECT CONTINUED

### **What things in our lives would need to change if we had to spend time hunting, gathering, and preparing our meals?**

We would have less time for paying jobs, leisure activities, sports, and television. We wouldn't need to join an exercise club, go to the gym to work out, or find time for walking or running to stay in shape.

### **Which foods do we still hunt and gather in Iowa?**

Pheasants, ducks, geese, rabbits, deer, turkey, fish, nuts, mushrooms, berries

### **What do you think happened when insects or animals destroyed the pioneers' food supply?**

The pioneers struggled to find or buy other sources of food.

**Do we worry about that today?** No.

### **Why not?**

Consumers assume that farmers protect their crops, in a safe way, from insects and animals. Farmers use pesticides, integrated pest management, and fencing to protect their crops from insects and animals. However, Iowa's corn crop is a major source of food for deer, field mice, raccoons, and other wild animals.

### **Which things are similar between Native Americans and pioneers and present day food supplies?**

Food is needed for survival. Food still comes from the land. We have to take care of the land that produces our food.

### **How many people did it take to get lunch from the land to the table for the Native Americans and most of the pioneers?**

It took an entire family and sometimes neighbors helped.

### **How many people does it take now?**

*List them on the board.* Consider the four parts of the food cycle – production, processing, marketing (or distribution), and consumers. Production is more than just a farmer. It involves machinery and supplies, contractors to build buildings, people to sell seeds, livestock and other things helpful to the farmer, veterinarians, and so on. Food has to move from a farm to a processing plant, to a distribution center, and to a grocery store or restaurant. Inspectors make sure it's safe to eat. Marketing people create ads. Think of all the people and their tasks at the grocery store.

Complete the activities in *AgTimes*.

*You may want to do the Optional Activity about the USDA Food Guide Pyramid. It compares the menu in this activity with the choices we make for lunch now.*

## APPLY

**HOMEWORK:** *Have the students write down their favorite lunch menus. Ask them to trace how their foods came from the land to them. Have them estimate how many people and how many steps it took before they could eat their favorite lunch foods. Give them a few days to complete the assignment. Discuss their findings with the class. Ask if they think their favorite foods existed when Iowa was settled in the early 1800s.*

## ACTIVITY 3 | IOWA MAP

**30 minutes**    **2 different days, plus research time**

**MATERIALS**    *AgTimes* magazines (one per student, found in the *Where We Live* kit)  
Iowa Transportation Map (found in the *Where We Live* kit)  
Iowa Map poster (found in the *Where We Live* kit)

### INTRODUCTION

Distribute the *AgTimes* magazines to the students. Discuss and complete the *Iowa Grown*, *Iowa Ag Brags*, and *Where in Iowa?* activities. Use this information as background for the following activity.

### DO

In Grade 4, Lesson 2, you placed several grain processing plants on the Iowa map. Using the *AgTimes* magazine and the following Web sites, find other locally grown foods and food processing plants that turn Iowa agricultural products into food for people. You also will discover information about diverse ways that Iowans grow food. Make a few icons and symbols for food produced or processed near where you live in Iowa and place them on the Iowa Map poster.

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#### Value Added Agriculture

[www.exnet.iastate.edu/Pages/valag](http://www.exnet.iastate.edu/Pages/valag)

Look at the maps and explore a few topics.

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#### A Taste of Iowa

[www.atasteofiowa.org](http://www.atasteofiowa.org)

Includes a directory of participants.

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#### Iowa Department of Economic Development

[www.state.ia.us/government/ided](http://www.state.ia.us/government/ided)

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#### Iowa Department of Agriculture and Land Stewardship

[www.agriculture.state.ia.us/](http://www.agriculture.state.ia.us/)

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#### Iowa Local Food Systems

[www.ialocalfood.org](http://www.ialocalfood.org)

Learn about local food programs that help people connect their food supplies back to the land.

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Consider contacting your local chamber of commerce for information on local food processing companies.

### REFLECT

**Were you surprised about any of the foods that are produced or processed in Iowa?**

**What are some examples of foods produced or processed in Iowa?**

**REFLECT**  
CONTINUED

**How could you help make sure that some of the foods you found continue to be grown or processed in Iowa?**

Purchase locally grown or processed foods from farmers' markets, grocery stores, and restaurants. Encourage your local school, restaurants, and grocery stores to carry locally grown or processed foods.

**What are the benefits of growing or processing foods in Iowa and selling them here?**

The foods might cost less because there wouldn't be transportation costs. Foods may taste better because they are fresher. You might know more about how they are grown, harvested, and processed. It helps the Iowa economy. It supports our neighbors. We could depend on our own supply of food without quantity and quality being affected by problems with weather, economic situations, or turmoil in states or countries that provide us food.

**APPLY**

Work in small groups to identify food items that you would like grown or processed in Iowa. Discuss where in Iowa they could be grown and processed and why. Develop a marketing plan to sell your new Iowa product. Draw newspaper ads or create radio and television ads to tell your story. Share your ideas with the rest of the class.

## ACTIVITY 4 | PIONEER DAY SCHOOL LUNCH

30 minutes

**MATERIALS** *To simulate and experience a pioneer school lunch, have the students bring their lunches in recycled butter or whipped topping plastic containers with lids. The lunches should include foods that do not require refrigeration. Students should not bring prepackaged convenience meals such as Lunchables™ or frozen entrees. Refer to the Introduction for more ideas for the pioneer school lunch.*

### INTRODUCTION

During the pioneer days, children carried their lunches in metal containers. Often, the buckets were recycled lard pails or corn syrup cans. Pioneer children would bring food that their families had grown or that was available at the time. The lunch might be a sandwich made from summer sausage, minced ham, peanut butter, or cheese. Sometimes the sandwich was bread and corn syrup or molasses. Homegrown fruits such as apples were popular, especially during harvest. Cakes or cookies were popular desserts. In the winter, lunches were kept cool in a snow bank. During the rest of the year, the pioneer children brought foods that would not spoil. On special occasions, families would join the children for lunch. Each family brought a hot dish to share with the other children.

*Discuss possible foods for today's pioneer school lunch.*

**MEAT:** jerky, peanut butter, pickled or salted meats such as summer sausage, hard-cooked eggs (Sometimes eggs were pickled, too.)

**BREAD:** whole grain breads, crackers, or biscuits

**FRUITS or VEGETABLES:** apple, grapes, berries, or something recently harvested

**DESSERT:** cookie or cake

Water

### Do

The students could eat their lunches on a grassy area near the school building or classroom to simulate eating on the prairie. They can compare what they brought. Decide whether they can trade prepackaged items. Play a game of softball called “kitten ball” or freeze tag. Or try the following game of “Squirrel.”

#### SQUIRREL

Select two students as volunteers. Have the rest of the students count off in fours. Have the ones stand together in a circle, the twos in another circle, and so on. Have the students in each circle count off from one to however many students there are. The number one person should stand in the middle of the circle. He or she becomes the squirrel. The remaining members of the circle should join hands to form a hollow tree. The trees should be scattered with ample room between them.

Have one of the volunteers be the homeless squirrel and the other the fox.

The fox chases the homeless squirrel. The squirrel may escape the fox by running under the arms of the players forming a hollow tree. Only one squirrel can be in a hollow tree at a time, so the squirrel in the circle must leave. The fox chases the new squirrel until it escapes. If the fox catches the squirrel, they exchange positions – the fox becomes the squirrel and seeks a hollow log.

At the end of approximately two minutes, the number twos in the circle become the squirrels and the game continues. Continue to give as many students as possible a chance to be squirrels.

## REFLECT

*After lunch, return to the classroom. Have the students think about the experience using the following questions.*

**How was the lunch you brought today different than the typical pioneer school lunch?**

**How have our food choices for lunch changed from pioneer days?**

**Would you like to eat a pioneer lunch every day?**

Explain.

**Who prepares your school lunch today compared to the pioneers?**

Parents, school food service workers, and some students prepare lunch today.

*Find out the guidelines that your school food service follows to create healthy school lunches. You may want to invite the person who determines the menus to come to your class and explain how he or she makes decisions.*

*You may choose to continue comparing school lunches by using the USDA Food Guide Pyramid in the Optional Activity.*

## APPLY

**Do you think the lunch you eat during the school day is good for you?**

**What makes it good for you?**

It might give you energy to make it through the rest of the day. It might provide healthy nutrients from each of the food groups in the food guide pyramid. It might contain foods that have been stored and prepared to make sure that they are safe to eat. It might meet special dietary needs related to your personal health.

**What can you do differently to make your school lunch better for you?**

**How can you add exercise at noontime?**

**Does your school provide opportunities to exercise at noon?**

Exercise is an important part of a healthy lifestyle.

## OPTIONAL ACTIVITY IDEAS

### COMPARISONS USING THE USDA FOOD GUIDE PYRAMID

#### Materials

USDA Food Guide Pyramid poster (found in the *Where We Live* kit, optional)

USDA Food Guide Pyramid activity sheet (from the back notebook pocket, optional)

*Display the USDA Food Guide Pyramid poster in a place where everyone can see it.*

The USDA (United States Department of Agriculture) Food Guide Pyramid originated in 1992. It serves as a guide to help Americans make healthy and balanced food choices. A healthy diet includes a variety of foods selected from each of the food groups.

*Distribute the USDA Food Guide Pyramid activity sheet. Have the students write in the correct food groups of one of the pyramids the name of the foods they traced when they split into groups of Native Americans, pioneers, farmers, and consumers. In the other pyramid, have the students write the names of the foods they ate for lunch today in the correct food group. Compare the nutritional value of their choices to the turkey, bread, berries, and milk lunch.*

*On the same pyramid on which they wrote down their lunches, have the students write down in the correct food groups their favorite foods. Then have them write down on the other pyramid the foods prepared for threshers at a threshing. (Refer to the Reflect section of this lesson.) Compare the nutritional difference of their favorite foods to some of the favorite foods of Iowans in the early 1900s.*

Many Americans have an unbalanced diet when compared to the food guide pyramid. We tend to consume several servings of fats, oils, and sugars in our diets each day. Fat often is replaced with sugar to give flavor to packaged foods. Many packaged and processed foods, especially snack foods, lack vitamins and minerals.

#### **Where did the pioneers get their sweeteners?**

Sorghum (the syrupy mixture left from boiling a sweet, juicy sorghum stalk) molasses (the syrupy mixture left from boiling sugar cane or sugar beets and removing the sugar crystals), corn syrup (the sweet syrup made by processing corn meal), and maple syrup. Native Americans taught the pioneers how to tap maple trees to collect the sap and boil it down into “sweetwater.”

#### **Where did they get their fat for cooking, baking, frying, and flavoring?**

They used lard (usually from pork fat) or butter (from churning cream).

#### **How have convenience, ready-made foods affected our food supply?**

We have a very abundant and inexpensive food supply that provides us many different choices.

#### **How do today’s prepackaged foods compare to fresh fruits and vegetables or other foods that settlers ate?**

Whole grain breads and cereals and fresh fruits and vegetables are better nutritional choices. Many packaged foods contain additional fat, sugar, and sodium. Also, packaging such as plastics, cans, boxes, and Styrofoam™ didn’t exist when the pioneers settled in Iowa. This packaging takes a long time, if ever, to decompose.

#### **What happens to all the packaging we throw away?**

**COMPARISONS USING  
THE USDA FOOD GUIDE  
PYRAMID** continued

Next to your historical food guide pyramid, write down the major physical activities that the pioneers did during the day. Next to your food guide pyramid, write down the major physical activities you usually do during the day. Who had more physical activities? Who burned more calories or used more energy during the day? The pioneers ate large meals, used a lot of lard and butter, and ate a lot of bread. Their bodies required a lot of energy for the hard physical labor of working the land and gathering their food supply.

Today, our bodies do not require as much energy. Our equipment and technology allow us more free time, but much of it is spent doing things that do not require energy such as watching television and playing computer games. Because of this energy imbalance, we find a lot more people are overweight.

**EFNEP Connections**

*If you are an EFNEP school, you may want to refer to Operation Healthy Bodies, Grade 4, "Soapy Solutions" and "Separate/Don't Contaminate," and Grade 2, "Wash Before You Bite" when doing the Apple Bee.*

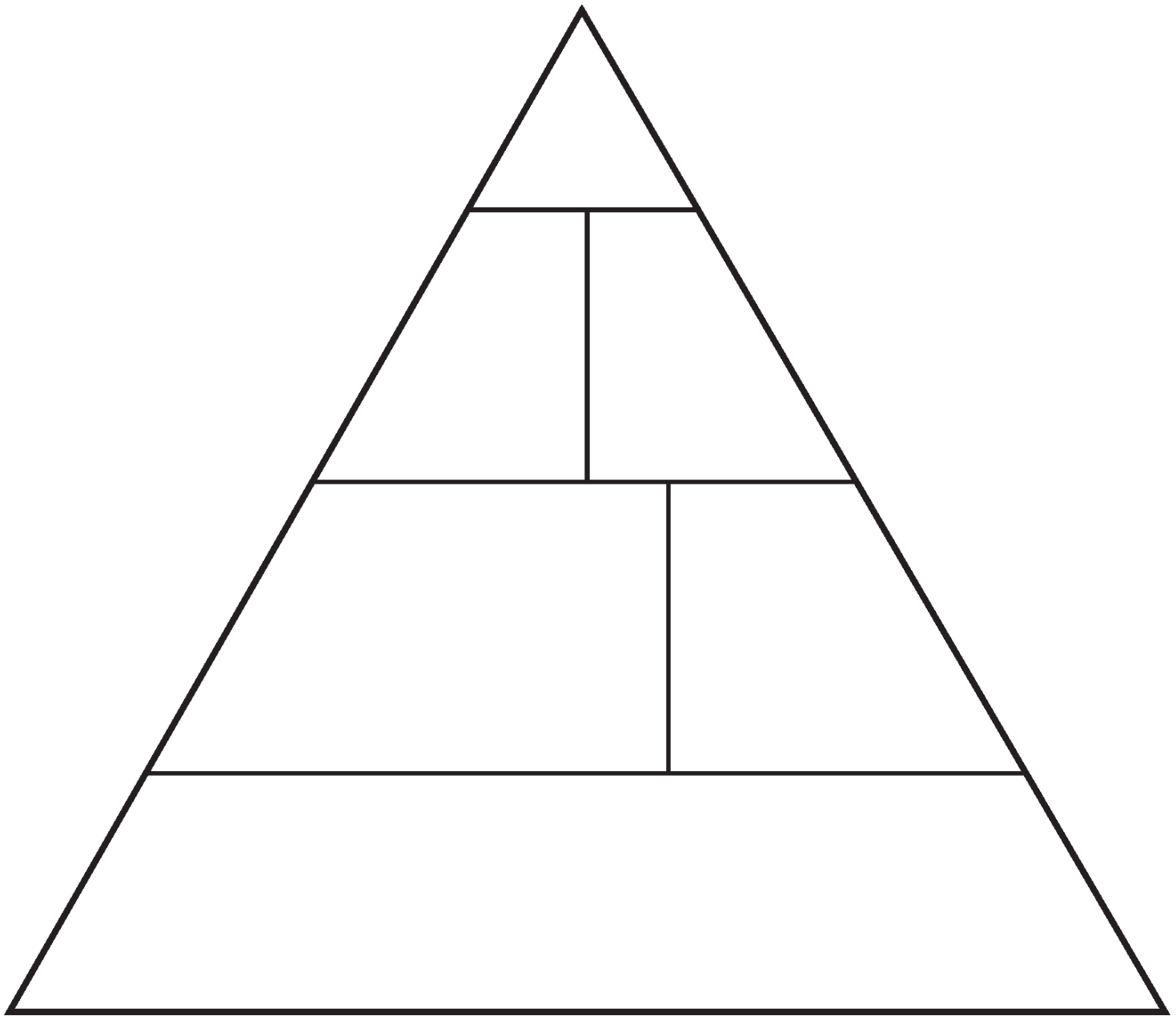
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- See the Web sites listed in the Iowa Map activity in this lesson.

# FOOD GUIDE PYRAMID

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# FOOD GUIDE PYRAMID

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