Introduction to agriCULTURE

Objectives
Through the Kentucky 4-H agriCULTURE curriculum, participants will:
- **Experience** different cultures through geography, government, economy, agriculture, customs, textiles, natural resources, and fun facts
- **Develop** an appreciation for global cultures
- **Challenge** youth’s current perspective on global cultures
- **Process** connections of agriculture products from around the world
- **Apply** knowledge gained to increase cultural awareness around products consumed

Introduction to Content
According to the U.S. Department of Education International Strategy Report (2012-2016), in order for youth to succeed in the 21st century workplace, they must develop knowledge and understanding of other countries, cultures, languages, and perspectives. The overall mission of 4-H is to provide opportunities for youth and adults to work together to create sustainable community change. This is accomplished within three primary content areas, or mission mandates: citizenship, healthy living, and science.

The 4-H citizenship mandate places emphasis on young people being engaged and active members of their communities, countries, and world. Citizenship is the foundation needed to help youth gain a broader understanding of life. The 4-H science mandate places emphasis on learning experiences through inquiry-based opportunities that connect knowledge, skills, and resources to practical application across multiple settings (4-H National Headquarters, 2011).

Materials Needed
- Flip chart for key terms
- Large world map
- Tape
- String
- Scissors
- Small pieces of paper or sticky notes
- Paper and writing utensils for participants
- Index cards for Mapping Activities 2, 3, and 4
- Labels from common foods at the grocery from other countries

Learn more at www.kentucky4h.org or contact your county Extension office.
Introduction to agriculture

Introduction (5 minutes)
1. Ask: Do you think you are connected to others from around the world? Say: We consume products from around the world every day! Let’s think about it together.
   - How are you connected to others from around the world?
   - What are ways that you are connected to other countries?
2. Ask: Have you ever heard of “six degrees of separation”?
   a. In short, this is a theory that states that people are six or fewer social connections away from each other. Through this lesson, we are going to explore how we are connected to others from around the world through social networks, textiles, and agriculture.

Background Information (10 minutes)
3. Review key terms that will be used today and in future lessons.
   a. Prior to lesson, write the key terms on the board, flip chart, or worksheet. Have participants share what they think each definition means. Give them the definition used in this curriculum, listed below.
   b. Culture: More than traits, values, customs, artifacts, and institutions, it is also a way of being; thinking; organizing knowledge; reasoning; problem solving; valuing past, present, and future; and relating to others (WeConnect: A Global Youth Citizenship Curriculum, 2014).
   c. Textiles: Textiles are materials that are manufactured from fibers or yarn (University of Manchester, n.d.).
   d. Agriculture: Agriculture is the act and science of cultivating the soil, growing crops, and raising livestock (National Geographic, n.d.).
   e. Interdependence: Interdependence is mutual dependence between people, groups, or things (WeConnect: A Global Youth Citizenship Curriculum, 2014).
   f. Product: A product is the final good or service intended for use by families or individuals. (Consumer Savvy: The Consumer in Me, 2001).
   g. Consumer: A consumer is one who purchases goods and services for use (Consumer Savvy: The Consumer in Me, 2001).

Activity 1: Interdependence (10 minutes)
4. Ask: Do you remember earlier I asked if you’d ever heard of “six degrees of separation”?
   a. Share: We are going to do an activity to show the connections between all of you in this room to simulate how our world is connected.
   b. Participants need a piece of paper and writing utensil. Have youth write down six things they enjoy (hobbies, schoolwork, daily activities, etc).
   c. After each person has completed the list, participants will go around and find others who like the same things. Participants can only use each other’s names once on their lists.
   d. Once the previous two steps are completed, map out how the group is connected. Do this visually on the flip chart.
   e. Call on one person and write the participant’s name on the top of the flip chart. That person will name another person and the connection shared between them, and the activity continues until everyone in the room is connected.
   f. Make the connection that this is a great example of how our world is connected by interests, products, ideals, etc., and that each person is a consumer of the world!
5. Make the connection to the next activity. This is a map of how our group is connected to one another. Complete the next activity to show how this group is connected to the world through culture, textiles, and agriculture.

Learn more at www.kentucky4h.org or contact your county Extension office.
Activity 2: Interdependence and Culture (10 minutes)

First, look at interdependence and culture definitions.

1. Ask: Do you think other countries’ cultures have an influence on your culture? Yes! Let’s investigate how your culture has been shaped by cultures of other countries.

2. Prepare flash cards that show games or celebrations in America. Also prepare or have string ready to cut for the connection on the map. Have one person come up, take the flash card, and place it on the country where the topic originated. Then, the person will take the string and trace it back to the United States.

   - Rock, Paper, Scissors. During the Chinese Han Dynasty (200 B.C.), it was called “shoushling.” Japan popularized this game in the 18th century, calling it “ken.” Various forms of this game are played all over the world. *(This one can be connected with string from China to Japan and then to the United States.)*

   - Gaga Ball. Gaga was played as early as the 1960s by the Jewish community in Perth, Australia. The game was introduced to Israel through an exchange of counselors from both countries. Roughly translated from Hebrew to English, Gaga means “hit, hit” or “touch, touch.” *(This one can be connected with string from Australia to Israel and then to the United States.)*

   - Halloween. Halloween finds its roots in an ancient harvest festival in Ireland called Samhain (pronounced sah-ween), which marked the beginning of the new year. Villagers believed that on this October night, ghosts could pass through our world on their way to the next.

3. Continue our mapping activity of interdependence with textiles next.

Activity 3: Interdependence and Textiles (10 minutes)

1. Say: We defined textiles, products, and consumers earlier in our introduction. You are a consumer of textile products.

2. Map where some of the textiles in the room came from. Check the tags in shirts, jackets, shoes, and backpacks to see where they were made.

3. Ask three people with items made in different countries to volunteer to come to the map, write the country name on a piece of paper, and place it on the map. Take the string and trace it back to the United States.

4. After adding textiles to our map, has the influence of other countries expanded?

5. Make the point that the more we consume, the more interconnected we are.
Activity 4: Interdependence and Agriculture (10 minutes)
1. Add agriculture to the map and show how we are dependent on the world for our agriculture products.
2. Ask: What are some of your favorite foods?
3. Collect labels from common foods that one may see at the grocery (rice, beans, bananas, avocados, apples, oranges, etc.)
4. Like in the previous activities, call people up to map where common food products are grown and connect those locations with string back to the United States.

Reflect and Apply (10 minutes)
Now that the map of interdependence is completed, one can see how connected and dependent this group is on the world. Reflect on this activity and apply it to the future by asking these questions:
1. Was there one area of the world that was more represented in textiles, cultural influence, or agriculture?
2. Why do you think that area is represented most?
3. What are other factors that impact our interdependence as a world?
4. Do you think all countries have access to food like the United States? Why or why not?

Resources
National 4-H Council (2014). WeConnect: A Global Youth Citizenship Curriculum.
https://www.nationalgeographic.org/encyclopedia/agriculture/

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Supporting Projects/Events
Kentucky 4-H provides additional experiences for youth to explore the world:
• International Summer Short-Term Program (inbound to U.S.)
• International Summer Short-Term Program (outbound from U.S.)
• Academic Year Program (inbound to U.S.)
• Kentucky 4-H International Service-Learning Program
• Kentucky 4-H State Fair projects: agriculture, horticulture, home environment, clothing, and textiles

Learn more at www.kentucky4h.org or contact your county Extension office.
Food Staples

TIME NEEDED

- One hour (time may vary depending on group size)

SKILL/GRADE LEVEL

- The intention of this lesson is to be utilized for any grade level with modifications based on the needs of the audience.

CORE AREA

- Leadership and citizenship
- Agriculture

LIFE SKILLS

- Giving
  - responsible citizens
- Relating
  - accepting differences
  - social skills
- Caring
  - sharing

EDUCATIONAL STANDARDS

- National 4-H mission mandates

CORE CURRICULUM

- Kentucky 4-H leadership and international programs

This is the second lesson of the Kentucky 4-H agriCULTURE program. For the objectives, please see the introduction section of the first lesson.

Materials Needed

Map, cards, and icons are available in the appendix.

Activity 1 items:
- World map
- Food staple cards
- Food staple icons

Activity 2 items:
- Egg dish cards
- Country name cards

Background Information

Food Staples*

Food is closely related to culture. Food staples are a dominant part of a population's diet and are eaten regularly. They are usually packed with calories to provide energy and are often inexpensive and plant based. According to National Geographic, out of all the plants in the world, "15 of them make up 90% of the world’s food energy intake." Two-thirds of this consists of wheat, rice, and corn. Other examples of food staples from around the world include millet and sorghum; tubers such as potatoes, cassava, yams, and taro; and animal products such as meat, fish, and dairy (National Geographic, 2011).

Although we are going to focus on how food reflects culture, regional food is determined by several factors, such as natural resources, climate, religious beliefs, infrastructure, and economics.

Food Cultures*

Food is an essential need for all humans, but it is more than just a means of survival. Our food culture tells a story about our identity, our home, our values, and our beliefs.

*Text used with permission from AgriCULTURE Curriculum, n.d.
Background Information (continued from previous page)

**Kentucky Food Culture and History**

As the first state west of the Allegheny Mountains, Kentucky’s lifestyle reflects old Virginia’s colonial ways. Kentucky has also been influenced by its own native culture and the ethnic and religious groups that settled here. We tend to be fond of our own brand of foods such as fried chicken, greens, grits, and corn bread. At the beginning of the 20th century, cooking and housekeeping remained hard work, as shown in Chart 1: Cooking and Eating in Kentucky—A Brief History. Our ancestors would be amazed at the variety and convenience of foods available in the 21st century. Food today is more affordable, safer, of greater variety, and more convenient than ever before.

**Chart 1: Cooking and Eating in Kentucky—A Brief History**

<table>
<thead>
<tr>
<th>Century</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11th</td>
<td>Native Americans occupied the land now called Kentucky. In the western part of the state at the meeting of the Ohio and Mississippi rivers lived the Woodland people. The Woodland people gathered a variety of crops and hunted animals for food and medicine. This area provided a wealth of natural resources, including water transportation and wildlife.</td>
</tr>
<tr>
<td>14th</td>
<td>Native Americans of the mound-building cultures, the Mississippian people, lived in permanent settlements in Western Kentucky, which allowed them to develop and experiment with annual crops.</td>
</tr>
<tr>
<td>16th</td>
<td>Native American tribes such as the Cherokee raised crops of corn, beans, various squashes, and sunflower seeds. They gathered fruits and vegetables, hunted game, and speared or trapped fish.</td>
</tr>
<tr>
<td>17th</td>
<td>People from Africa arrived in bondage, bringing okra, black-eyed peas, collard greens, yams, and watermelons to Kentucky and the rest of the South.</td>
</tr>
<tr>
<td>18th</td>
<td>The first Europeans explored Kentucky in the mid-1700s. By the late 1700s, pioneer settlements were established, bringing Scottish, English, and German influences to Kentucky. The Europeans learned from the Native Americans and contributed cattle, pigs, chickens, cabbage, turnips, apples, peaches, and apricots to the local diet.</td>
</tr>
<tr>
<td>19th</td>
<td>During the 1800s, Kentucky cooks began to publish books to share their culinary achievements. In 1839, Lettice Bryan published The Kentucky Housewife. In 1874, Housekeeping in the Bluegrass was published by the women of the Presbyterian Church of Paris. In 1884, The New Kentucky Home Cook Book was published by the Maysville Methodist Episcopal Church. The Kentucky Cookery Book by Mrs. Peter A. White was published in 1891, and Mrs. John G. Carlisle’s Kentucky Cook Book was published in 1893.</td>
</tr>
</tbody>
</table>

For additional information on Kentucky’s food culture and history, see the Kentucky Food Heritage Extension publication available online at https://tinyurl.com/kyfoodheritage.

**Text used with permission from Kentucky Food Heritage Publication, 2000.**

**Kentucky Agricultural Facts**

Of Kentucky’s total acreage (25.4 million acres), 12.8 million acres (50%) is farmland. Kentucky farms produce a variety of agricultural products. The top agricultural enterprises (based on sales) in the Commonwealth include poultry, horses, cattle, soybeans, and corn. Each year in Kentucky, agriculture contributes roughly $45.6 billion to our economy (KY Food and Farm, n.d.).

Learn more at www.kentucky4h.org or contact your county Extension office.
Activity 1: Food From Around the World (15-30 minutes)

In this activity, youth will learn about food staples in Kentucky and from across the world.

Prior to the activity:
1. Review the Background Information section and be prepared to have a discussion with youth on food staples and food culture.
2. Print the world map provided in the appendix of this lesson (if possible, print as a poster so youth are more easily able to locate countries and pin food staple icons). Optional: National Geographic has online interactive maps for each of the food staple card items at [https://www.nationalgeographic.org/maps/wbt-staple-food-crops-world/](https://www.nationalgeographic.org/maps/wbt-staple-food-crops-world/).
3. Print and cut out each of the food staple cards and icons provided in the appendix.
4. Optional: Purchase food products that use the food staples discussed in the activity for youth to see and/or sample.
5. Optional: Print out the corn, soybeans, and wheat posters available from Kentucky Agriculture and Environment in the Classroom* for youth to read and use during the activity. These posters are also available for purchase from Kentucky Agriculture and Environment in the Classroom online at [https://www.teachkyag.org/resources](https://www.teachkyag.org/resources).

*Kentucky Agriculture and Environment in the Classroom resources and activities are available online.

Corn: [https://www.teachkyag.org/lessons/all-about-corn](https://www.teachkyag.org/lessons/all-about-corn)
Soybeans: [https://www.teachkyag.org/lessons/all-about-soybeans](https://www.teachkyag.org/lessons/all-about-soybeans)
Wheat: [https://www.teachkyag.org/wheat](https://www.teachkyag.org/wheat)

During the activity:
1. Discuss with youth the concept of food staples.
2. Break youth up into teams. Provide each team with one or more food staple cards (number of cards will depend upon the size of the group and number of youth). Tell youth that the cards provided in this activity are examples of food staples and are not an all-inclusive list.
3. Call out each food staple card. Have that team locate the top production countries of that food on the map. Using a tack or push pin, have the team pin one of the food staple icons to that country and read the description for that food provided on the card.
4. As each team identifies where their food staple is produced, ask all participants if they have heard of that food item before, if they have tasted that item, etc. Obviously, items such as corn, wheat, and rice will be very familiar to youth, whereas other items, such as cassava, will likely be less familiar. If you have food products that contain that food staple, allow youth to look at and/or sample that item.

Learn more at [www.kentucky4h.org](http://www.kentucky4h.org) or contact your county Extension office.
**Activity 2: Eggs-traordinary Dishes**

**Time:** 15-30 minutes (time may vary depending on group size)

In this activity, youth will match different egg dishes with their countries of origin to learn that foods are prepared in different ways across the world.

**Prior to the activity:**
1. Review the Background Information section. Explain to youth that food tells a story about our identity, our home, our culture, and our beliefs, and how food is prepared in different ways all across the world.
2. Print and cut out the egg dish cards and country name cards.
3. Note: An online quiz of this activity is available online at [https://tinyurl.com/eggdishes](https://tinyurl.com/eggdishes). This online quiz can be played by participants in lieu of doing the activity.
4. Optional: Have a few of the egg dish items available for youth to sample and/or allow youth to prepare one or more of the egg dishes.

**During the activity:**
1. Explain to youth that food tells a story about our identity, our home, our culture, and our beliefs, and how food is prepared in different ways all across the world.
2. Give each person an egg dish card or a country name card (depending on the number of participants you have, you may need to give each person more than one card OR reduce the number of egg dish/country name cards).
3. Explain that each egg dish represented on the egg dish cards is common to a specific country. Have youth try to match up their card with the correct corresponding egg dish or country name card. (For example, the Huevos Rancheros egg dish card matches the Mexico country name card.)
4. After everyone has matched up their cards, go through and allow each grouping to share their egg dish card and country name card. Did each group get the correct matching?
5. Optional: Allow youth to sample various egg dish items and/or prepare one or more of the dishes.

**Reflect and Apply**

Think about what you eat every day and discuss the following questions:

- What are the food staples of your diet and your family’s diet?
- How is this similar to and/or different from others in the class?
- Why do you think these food items are your staples? Does your family or community grow them? Are they part of your culture?

**References**


Food Staples: World Map

Food Staples: Cassava

Top Production Countries: Brazil, Democratic Republic of the Congo, Indonesia, Nigeria, Thailand (National Geographic, 2014).

Cassava is a food staple for people in Latin America and Africa (National Geographic, 2011). The roots of the cassava plant are eaten after they are cooked. They can be eaten as is after cooking or used in other recipes and dishes. They can also be used as a feed for livestock. The starch of the cassava root can also be used for plywood, paper and bioethanol production (FAO, 2016).

Cassava Plant

Cassava Root

Top image: “Manihot esculenta cassava flower” by Vijayanrajapuram, CC BY-SA 4.0
Bottom image: “Manihot esculenta dsc07325” by David Monniaux, CC BY-SA 3.0

Learn more at www.kentucky4h.org or contact your county Extension office.
**Food Staples: Corn/Maize**

**Top Production Countries**: Argentina, Brazil, China, Mexico, United States. *More than 40% of the world’s corn is grown in the U.S. (National Geographic, 2011 and 2014).*

In Kentucky, corn is one of the leading crops grown (KY Food and Farm, n.d.). For more information about corn in Kentucky, visit [https://www.kyfoodandfarm.info/corn](https://www.kyfoodandfarm.info/corn).

Corn is commonly referred to as maize outside of the U.S. (National Geographic, 2011). The seeds of the corn plant are eaten. Corn is used in numerous ways (National Geographic, 2011; KY Food and Farm, n.d.). Examples include:

- Boiled, grilled, or roasted, and eaten on the cob or removed from the cob
- Dried and ground into cornmeal
- Soaked in lye to produce hominy
- Processed into corn oil, corn syrup, cornstarch, and whiskey, just to name a few products
- Ground into livestock feed
- Made into ethanol fuel

Learn more at [www.kentucky4h.org](http://www.kentucky4h.org) or contact your county Extension office.

Corn field image on left by Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org, CC BY-NC 3.0

Corn ear image on right by Howard F. Schwartz, Colorado State University, Bugwood.org, CC BY 3.0
Food Staples: Rice

Top Production Countries: China, India, Indonesia (National Geographic, 2011 and 2014). Roughly 85% of the rice eaten in the U.S. is produced by American farmers (Texas A&M, n.d.).

Rice is a food staple for many people across the world, especially Asia, Latin America, and part of Africa (National Geographic, 2011). The seeds of the rice plant are eaten. In addition to eating rice as is, rice is also used to produce edible items such as rice flour, cereal, rice starch, and rice syrup; and non-edible items such as packing peanuts (Texas A&M, n.d.).

Images by Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org, CC BY-NC 3.0

Learn more at www.kentucky4h.org or contact your county Extension office.
**Food Staples: Corn/Maize**

Top Production Countries: Argentina, Brazil, China, India, Paraguay, United States (National Geographic, 2014).

In Kentucky, soybeans are one of the leading crops grown (KY Food and Farm, n.d.). For more information about soybeans in Kentucky, visit [https://www.kyfoodandfarm.info/soybeans](https://www.kyfoodandfarm.info/soybeans).

The seeds are the part of the soybean plant that is eaten. The seeds are used to make many items, such as soybean oil, soy milk, soy sauce, soy flour, tofu, tempeh, and miso. Soybean oil is used in numerous products, including coffee creamers, bakery products, cooking sprays, candies, margarine, chocolate coatings, mayonnaise, and salad dressings, just to name a few. Soybeans are also used in nonedible items such as lotions, soaps, cosmetics, particle board, newspaper ink, and biodiesel.

Images by Kentucky Soybean Board

Learn more at [www.kentucky4h.org](http://www.kentucky4h.org) or contact your county Extension office.
Food Staples: Wheat

Top Production Countries: China, India, France, Russia, and United States (National Geographic, 2011 and 2014).

Kentucky ranks 14th in wheat production in the United States (KY Food and Farm, n.d.). For more information on wheat production in Kentucky, visit https://www.kyfoodandfarm.info/wheat.

The seeds are the part of the wheat plant that is eaten. Wheat is ground and used to make wheat flour, which is used in numerous items such as breads, pastries, baked goods, pastas, cereals, crackers, and noodles.

Image by Howard F. Schwartz, Colorado State University, Bugwood.org, CC BY 3.0.
Food Staples: Cassava Icon Cards

Learn more at www.kentucky4h.org or contact your county Extension office.

Image: "Manihot esculenta dsc07325" by David Monniaux, CC BY-SA 3.0
Food Staples: Corn/Maize Icon Cards

Learn more at www.kentucky4h.org or contact your county Extension office.

Image by Howard F. Schwartz, Colorado State University, Bugwood.org, CC BY 3.0
Food Staples: Rice Icon Cards

Image by Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org, CC BY-NC 3.0

Learn more at www.kentucky4h.org or contact your county Extension office.
Food Staples: Soybean Icon Cards

Learn more at www.kentucky4h.org or contact your county Extension office.

Image by Kentucky Soybean Board
Food Staples: Wheat Icon Cards

Learn more at www.kentucky4h.org or contact your county Extension office.

Image by Howard F. Schwartz, Colorado State University, Bugwood.org, CC BY 3.0
Food Staples: Egg Dish Cards

Tamagoyaki

“Tamagoyaki” by WordRidden, CC BY 2.0

Soufflé

“Soufflé” by Pierre-alain dorange, CC BY-SA 3.0

Eggs Drumkilbo

Pavlova

“Pavlova garnished with cream and strawberries” by Brett Jordan via Flickr, CC BY 2.0

Learn more at www.kentucky4h.org or contact your county Extension office.
Food Staples: Egg Dish Cards

Kookoo

“Kuku_Sabzi_(Iranian_food)” by Sonabona, CC0 1.0

Huevos Rancheros

“Ela huevos rancheros” by Elchavobeer, CC BY-SA 3.0

Spaghetti Frittata

M’hanncha

“M’hanncha – Moroccan Snake Pastry” by She Paused 4 Thought via Flickr, CC BY-NC-ND 2.0

Learn more at www.kentucky4h.org or contact your county Extension office.
Food Staples: Egg Dish Cards

Egg Drop Soup

Coconut Bread

Matzo Brei

Quiche Lorraine

“Matzo brei – Mixed with egg” by Rebecca Siegel via Flickr, CC BY 2.0

“Quiche lorraine de beicon” by demi via Flickr, CC BY 2.0

Learn more at www.kentucky4h.org or contact your county Extension office.
Food Staples: Egg Dish Cards

Frittata

Vasilopita

“Frittata” by kykyru2 via Flickr, CC BY 2.0

Learn more at www.kentucky4h.org or contact your county Extension office.
Food Staples: Country Name Cards

Australia
Britain
China
France
Germany
Greece
Iran
Israel
Italy
Jamaica
Japan
Mexico
Morocco
Spain

Learn more at www.kentucky4h.org or contact your county Extension office.
## Food Staples: Activity 2 Answer Key

<table>
<thead>
<tr>
<th>Country</th>
<th>Egg Dish</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Pavlova</td>
<td>Meringue dessert</td>
</tr>
<tr>
<td>Britain</td>
<td>Eggs Drumkilbo</td>
<td>Hard-boiled eggs and seafood dish</td>
</tr>
<tr>
<td>China</td>
<td>Egg Drop Soup</td>
<td>Soup dish</td>
</tr>
<tr>
<td>France</td>
<td>Soufflé</td>
<td>Baked egg-based dish</td>
</tr>
<tr>
<td>Germany</td>
<td>Quiche Lorraine</td>
<td>Egg-based tart</td>
</tr>
<tr>
<td>Greece</td>
<td>Vasilopita</td>
<td>Bread or cake</td>
</tr>
<tr>
<td>Iran</td>
<td>Kookoo</td>
<td>Egg-based dish (similar to a frittata)</td>
</tr>
<tr>
<td>Israel</td>
<td>Matzo Brei</td>
<td>Breakfast dish containing eggs and matzo (matzo is unleavened flatbread)</td>
</tr>
<tr>
<td>Italy</td>
<td>Spaghetti Frittata</td>
<td>Egg-based dish that uses cooked spaghetti</td>
</tr>
<tr>
<td>Jamaica</td>
<td>Coconut Bread</td>
<td>Bread</td>
</tr>
<tr>
<td>Japan</td>
<td>Tamagoyaki</td>
<td>Rolled omelet</td>
</tr>
<tr>
<td>Mexico</td>
<td>Huevos Rancheros</td>
<td>Breakfast dish</td>
</tr>
<tr>
<td>Morocco</td>
<td>M’hanncha</td>
<td>Cake (referred to as snake cake due to its shape)</td>
</tr>
<tr>
<td>Spain</td>
<td>Frittata</td>
<td>Egg-based dish</td>
</tr>
</tbody>
</table>

Learn more at [www.kentucky4h.org](http://www.kentucky4h.org) or contact your county Extension office.
Food Spotlight

This is the third lesson of the Kentucky 4-H agriCULTURE program. For the objectives, please see the introduction section of the first lesson.

Materials Needed
- Pen or pencil (one per person)
- World map
- Drinking water and cups (one per person)
- Napkins

Cheese Exploration activity:
- Food Spotlight: Cheese handouts (one per person or group)
- Cheese samples*
- Sampling plates (one per cheese sample per person)

*For the Cheese Exploration activity, choose four or more different cheeses for youth to sample. (Optional: if possible, provide at least one sample of each type of cheese discussed in the Food Spotlight: Cheese handouts (soft-fresh cheese, soft-ripened cheese, semisoft cheese, semihard cheese, hard cheese, processed cheese).

Prosciutto Exploration activity:
- Food Spotlight: Prosciutto handouts (one per person or group)
- Sliced city ham
- Sliced country ham
- Sliced prosciutto
- Sampling plates (three plates per person)

Background Information
Cheese and prosciutto will be spotlighted in this lesson. For each food, an overview and a country spotlight are provided. Please review these prior to doing the lesson with youth.
Activity Instructions

Prior to the activities:
1. Review and print the Food Spotlight handouts for each of the two foods and the world map. Youth can work individually or in groups. Print one handout for each person or group.
2. The activities in this lesson include sampling and eating cheeses and meats. Review participants’ dietary restrictions prior to the activities to ensure you are aware of any food allergies and/or restrictions.
3. For the Cheese Exploration activity, watch these two videos online: https://youtu.be/FNSONkpupzE and https://youtu.be/wxm8zTzU_8o.
4. *For the Cheese Exploration activity, choose four or more different cheeses for youth to sample. (Optional: if possible, provide at least one sample of each type of cheese discussed in the Food Spotlight: Cheese handout (soft-fresh cheese, soft-ripened cheese, semisoft cheese, semihard cheese, hard cheese, processed cheese).

Cheese Exploration activity:
1. Watch this video with youth: https://youtu.be/wxm8zTzU_8o.
2. Provide each person with the Food Spotlight: Cheese handout.
3. Have a discussion with youth about cheese using the Food Spotlight: Cheese handout.
4. Have youth locate New Zealand on the world map.
5. After all participants have washed their hands, provide each participant with plates and cheese samples. Have participants label each plate so they remember which cheese is which.
6. Have participants observe and taste each sample and complete the table on the Food Spotlight: Cheese handout. Tell youth to drink water in between tastings to cleanse the palate. After all participants have completed the table, have them share their observations.

Prosciutto Exploration activity:
1. Provide each person with the Food Spotlight: Prosciutto handout.
2. Have a discussion with youth about prosciutto using the Food Spotlight: Prosciutto handout.
3. Have youth locate Italy on the world map.
4. After all participants have washed their hands, provide each participant with three plates. Have participants label each plate either city ham, country ham, or prosciutto.
5. Provide each participant with a sample of city ham, country ham, or prosciutto on their labeled plate.
6. Have participants observe and taste each sample and complete the table on the Food Spotlight: Prosciutto handout. Tell youth to drink water in between tastings to cleanse the palate. After all participants have completed the table, have them share their observations.
Food Spotlight

Reflect and Apply
- How is each spotlighted food (cheese and prosciutto) related to the country spotlighted for that food (New Zealand and Italy)?
- What are some ways your culture is similar to or different from the spotlighted country?
- If you could choose one food to spotlight from your culture, what food would you choose and why?

Extended Learning
- The agriCULTURE curriculum created by Kiley Baerg spotlights additional foods (including rice, potatoes, sugar cane, and coffee). Explore these food spotlights with your 4-Hers. These food spotlights are available online at https://sites.google.com/view/culture-through-agriculture/food-spotlights?authuser=0.
- Lead 4-Hers in making their own cheese. 4-H at Home’s Make Your Own Cheese Activity is available online at https://4-h.org/wp-content/uploads/2021/06/4-H-At-Home-USDA-Make-Your-Own-Cheese_v2.pdf.
- Encourage 4-Hers to participate in the 4-H Country Ham project. For more information, visit https://afs.ca.uky.edu/meats/4-h-country-ham-project.

References
Text from the Kentucky Farm 2 School Curriculum* was adapted with permission.

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Learn more at www.kentucky4h.org or contact your county Extension office.
Food Spotlight: Cheese

Cheese is made from milk. The variety and flavoring of cheese greatly varies based on which species of animal the milk comes from; however, cows and goats are the most common milk suppliers.

Cheesy Terms
- Coagulate: to change or be changed from a liquid into a thickened mass
- Curds: the part of milk that coagulates when the milk sours or is treated with enzymes. They are used to make cheese.
- Emulsify: to combine two liquids that normally don’t mix easily. The liquids are combined very slowly, usually drop by drop, while beating vigorously, which suspends drops of liquid throughout each other.
- Rennet: an enzyme that is added to help milk coagulate to form curds
- Ripened cheese: cheese that has ripened for three months to two years before it is eaten, in order to develop its flavor and texture
- Vat: tub where the curd is formed and cut or broken
- Whey: the watery part of milk that is separated from the curd in the process of making cheese
- Unripened cheese: cheese that has a high moisture content and is eaten fresh within a few weeks

Types of Cheese
Cheese varies greatly in texture, flavor, and variety. There are cheese experts all over the world who give insights into cheese pairings and quality of cheese.

Different categories of cheese are determined by texture or consistency and the degree or kind of ripening. Six different categories of cheese will be discussed in this lesson.
- Soft-fresh cheese
- Soft-ripened cheese
- Semisoft cheese
- Semihard cheese
- Hard cheese
- Processed cheese

Soft-fresh cheeses are often called acid-set cheeses, because the milk is usually coagulated with lactic acid instead of rennet and enzymes. Whey is drained from soft cheeses under gravity rather than mechanical pressure. Most soft-fresh cheeses are packaged—usually in tubs—without being cut, pressed into a form, or aged. Examples of soft-fresh cheeses include the following:
- Cottage cheese
- Cream cheese
- Feta
- Neufchâtel
- Mascarpone
- Queso blanco
- Ricotta

Soft-ripened cheeses are almost the same as soft-fresh cheeses. The distinctive step in the manufacturing of soft-ripened cheeses that makes it different is the use of a beneficial mold. The mold allows the cheese to ripen from the outside in. Examples of soft-ripened cheeses include the following:
- Brie
- Camembert
Food Spotlight: Cheese

Types of Cheese (continued from previous page)

*Semisoft cheeses* come in two different types: washed rind and dry rind. The washed-rind cheeses are surface-treated with special bacteria and then washed with a solution to encourage the growth of the bacteria smear. Washed-rind cheeses ripen from the outside in. Dry-rind cheeses are cured without a surface treatment. Examples of semisoft cheeses include the following:
- Brick
- Havarti
- Monterey Jack
- Limburger
- Muenster
- Pepper Jack

*Semi-hard cheeses* are made by heating raw milk, starter cultures, and enzymes to create a semisolid mass. It is then cut, stirred, and heated, and the whey is drained. Examples of semi-hard cheeses include the following:
- Cheddar
- Colby
- Swiss

*Hard cheeses* are made by cutting the formed curd into small particles the size of wheat kernels. The cut curd is then heated to a higher temperature than other cheeses, and the curd settles to the bottom of the vat. The pressed curd is salted in a brine solution or dry-salted, perforated with needles, and dry-cured. As the cheese cures, it is periodically turned, scraped, and rubbed with vegetable oil. Examples of hard cheeses include the following:
- Dry Monterey Jack (Dry Jack)
- Parmesan
- Romano
- Asiago
- Pepato

*Processed cheeses* are pasteurized and made by mixing and heating natural cheeses. The cooking temperature depends on whether the end product is processed cheese, processed cheese food, or processed cheese spread. Examples of processed cheeses include the following:
- Velveeta
- American
- Cheese Whiz

New Zealand

New Zealand is known for its beautiful and diverse landscape. Often used by the filmmaking industry, New Zealand has a thriving tourism sector, as people visit this carefree way of life. Generally, they attempt to grow all perishable items that have a short shelf life. Milk is produced in large quantities to make cheese and to feed the New Zealand population, along with fresh fruits and vegetables. Grocery prices are often higher on islands due to the added cost of importing.

Learn more at [www.kentucky4h.org](http://www.kentucky4h.org) or contact your county Extension office.
Cheese Tasting
For each sample:
- Place a section between your thumb and index finger and gently squeeze to see if it is a firm or soft cheese. Record color and texture in the table below by circling the best description or adding your own next to the “other” option.
- Smell the piece of cheese and record your observation in the table.
- Taste the piece of cheese by chewing it and allowing it to sit on your tongue while you take a deep breath. Record your observations in the table.
- After swallowing (or disposing of) the cheese, cleanse your palate and repeat the process with each sample.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Color</th>
<th>Texture</th>
<th>Smell</th>
<th>Taste</th>
<th>Other Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yellow Orange</td>
<td>Soft</td>
<td>Sharp</td>
<td>Tangy</td>
<td>Sharp Mild</td>
</tr>
<tr>
<td></td>
<td>White Off-White</td>
<td>Semisoft</td>
<td>Milk</td>
<td>Sharp</td>
<td>Mild</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
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<td>Mellow</td>
<td>Pungent</td>
<td>Nutlike Acidic</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
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<td>Other:</td>
<td>Other:</td>
<td>Other:</td>
</tr>
<tr>
<td>2</td>
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<td>Sharp</td>
<td>Tangy</td>
<td>Sharp Mild</td>
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<tr>
<td></td>
<td>White Off-White</td>
<td>Semisoft</td>
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</tr>
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</tr>
<tr>
<td></td>
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<td>Other:</td>
<td>Other:</td>
<td>Other:</td>
</tr>
<tr>
<td>3</td>
<td>Yellow Orange</td>
<td>Soft</td>
<td>Sharp</td>
<td>Tangy</td>
<td>Sharp Mild</td>
</tr>
<tr>
<td></td>
<td>White Off-White</td>
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<td>Milk</td>
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<td>Pungent</td>
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<tr>
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<td>Other:</td>
<td>Other:</td>
<td>Other:</td>
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<tr>
<td>4</td>
<td>Yellow Orange</td>
<td>Soft</td>
<td>Sharp</td>
<td>Tangy</td>
<td>Sharp Mild</td>
</tr>
<tr>
<td></td>
<td>White Off-White</td>
<td>Semisoft</td>
<td>Milk</td>
<td>Sharp</td>
<td>Mild</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
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<td>Mellow</td>
<td>Pungent</td>
<td>Nutlike Acidic</td>
</tr>
<tr>
<td></td>
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<td>Semifirm</td>
<td>Other:</td>
<td>Other:</td>
<td>Other:</td>
</tr>
</tbody>
</table>
Cheese Tasting
For each sample:
- Place a section between your thumb and index finger and gently squeeze to see if it is a firm or soft cheese. Record color and texture in the table below by circling the best description or adding your own next to the “other” option.
- Smell the piece of cheese and record your observation in the table.
- Taste the piece of cheese by chewing it and allowing it to sit on your tongue while you take a deep breath. Record your observations in the table.
- After swallowing (or disposing of) the cheese, cleanse your palate and repeat the process with each sample.

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<th>Smell</th>
<th>Taste</th>
<th>Other Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Yellow Orange</td>
<td>Soft</td>
<td>Sharp</td>
<td>Tangy Sharp</td>
<td>Sharp Milk Mellow</td>
</tr>
<tr>
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<td>Semisoft</td>
<td>Milk</td>
<td>Mild</td>
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</tr>
<tr>
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<td>Other:</td>
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<td>Mellow</td>
<td>Nutlike</td>
<td>Acidic</td>
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<tr>
<td></td>
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<td>Semifirm</td>
<td>Pungent</td>
<td>Other:</td>
<td>Off-White</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
<td>Other:</td>
<td>Other:</td>
<td>Other:</td>
<td>Acetic</td>
</tr>
<tr>
<td>6</td>
<td>Yellow Orange</td>
<td>Soft</td>
<td>Sharp</td>
<td>Tangy Sharp</td>
<td>Sharp Milk Mellow</td>
</tr>
<tr>
<td></td>
<td>White Off-White</td>
<td>Semisoft</td>
<td>Milk</td>
<td>Mild</td>
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</tr>
<tr>
<td></td>
<td>Other:</td>
<td>Firm</td>
<td>Mellow</td>
<td>Nutlike</td>
<td>Acidic</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
<td>Semifirm</td>
<td>Pungent</td>
<td>Other:</td>
<td>Other:</td>
</tr>
<tr>
<td>7</td>
<td>Yellow Orange</td>
<td>Soft</td>
<td>Sharp</td>
<td>Tangy Sharp</td>
<td>Sharp Milk Mellow</td>
</tr>
<tr>
<td></td>
<td>White Off-White</td>
<td>Semisoft</td>
<td>Milk</td>
<td>Mild</td>
<td>Pungent</td>
</tr>
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<tr>
<td></td>
<td>Other:</td>
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<td>Pungent</td>
<td>Other:</td>
<td>Other:</td>
</tr>
<tr>
<td>8</td>
<td>Yellow Orange</td>
<td>Soft</td>
<td>Sharp</td>
<td>Tangy Sharp</td>
<td>Sharp Milk Mellow</td>
</tr>
<tr>
<td></td>
<td>White Off-White</td>
<td>Semisoft</td>
<td>Milk</td>
<td>Mild</td>
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</tr>
<tr>
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<td>Other:</td>
<td>Firm</td>
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<td>Nutlike</td>
<td>Acidic</td>
</tr>
<tr>
<td></td>
<td>Other:</td>
<td>Semifirm</td>
<td>Pungent</td>
<td>Other:</td>
<td>Other:</td>
</tr>
</tbody>
</table>
Food Spotlight: Prosciutto

Prosciutto, made from a hog’s hind leg or thigh (see image below), is an Italian dry-cured ham that has been aged for several months. It is most famously made in Italy and has a unique flavor and taste.

[Image: Prosciutto di Parma affettato by Sun Taro, CC BY-SA 2.0]

Making Prosciutto

Prosciutto is made by using salt to cure ham. The salt draws out the water and preserves the meat. The ham is then allowed to age for an amount of time to bring out the flavoring (usually no less than three months). As with many cured meats, different spices or flavorings may be added prior to the aging process.

Slicing and Eating

Prosciutto is generally served in thin slices, as they are rich in texture and taste.

“Prosciutto di Parma affettato” by Sun Taro, CC BY-SA 2.0

Italy

Italy is built on years of history—literally. In Rome, a subway (underground railroad) was not installed because as they dug down, they continued to find historical artifacts. Italians have taken many years to develop the food culture that they have today. Prosciutto is just a small taste of a culture that emphasizes quality of food over expense and convenience.

Italians value high-quality tastes and textures. They are willing to be patient and pay attention to detail. They are very particular about what they feed animals, as it affects the taste of the end product. Tasting Italian food is like looking into history, which is easy to do in Rome, as modern buildings stand next to ancient ones.
Ham Sampling

Prosciutto is made by using salt to cure ham. The salt draws out the water and preserves the meat. The ham is then allowed to age for an amount of time to bring out the flavoring (usually no less than three months). As with many cured meats, different spices or flavorings may be added prior to the aging process. Country ham is a tradition for many Kentucky families. Like prosciutto, country ham is a dry-cured ham. However, unlike prosciutto, which is not smoked, country hams can be smoked or unsmoked. City ham is wet-cured.

As you observe and taste each sample, complete the table below.

<table>
<thead>
<tr>
<th></th>
<th>City Ham</th>
<th>Country Ham</th>
<th>Prosciutto</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel the outer layer of the sample and write your observations (dry, moist, grainy, smooth, etc.).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smell each sample and record your observation (strong, mild, salty, earthy, etc.).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taste each sample and record your observations (salty, flavored, porklike, smoky, etc.).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As you taste, explore the texture. Record your observations (smooth, stringy, slimy, chalky, etc.).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal preference: Check the box of the product you would prefer to eat frequently.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Learn more at www.kentucky4h.org or contact your county Extension office.
Food Staples: World Map

Image: World Map- Political, Geology News and Information, geology.com
This is the fourth lesson of the Kentucky 4-H agriCULTURE program. For the objectives, please see the introduction section of the first lesson.

**Materials Needed**
- Four eight-inch-square pieces of cardstock per youth
- Glue
- Scissors
- One 16-inch-square foam board per youth
- Five sets of pattern samples (shown in the appendix)

**Introduction**

The connection we have with textiles is one that starts at birth and continues throughout our lives. As a result of this connection, civilizations all over the world have developed their own textiles, patterns, and methods for creating them. Many prints that are seen in today’s textile industry have cultural roots and significant historical meaning. Some examples of these prints include batik from Indonesia, Kuba cloth from the Democratic Republic of the Congo, and tartan from Scotland. Many of us give no thought to the story our textiles and patterns share, but we could be sharing a message without even knowing it.

Exploring these textiles can be a fun way to learn about other cultures and to provide a lens for young people to explore their own. This lesson will start with an exploration of common textiles and transition to young people infusing these different textiles into the traditional Kentucky art of quilt making.

**SKILL/GRADE LEVEL**
- The intention of this lesson is to be utilized for any grade level with modifications based on the needs of the audience.

**TIME NEEDED**
- 50 minutes, depending on skill level

**CORE AREA**
- Leadership and citizenship
- Family and consumer sciences

**LIFE SKILLS**
- Giving
  - responsible citizens
- Working
  - marketable skills
- Being
  - self-responsibility
- Relating
  - accepting differences
  - social skills
- Caring
  - sharing
  - empathy
  - concern for others

**EDUCATIONAL STANDARDS**
- National 4-H mission mandates

**CORE CURRICULUM**
- Kentucky 4-H textiles

Learn more at [www.kentucky4h.org](http://www.kentucky4h.org) or contact your county Extension office.
Background Information

Batik: A dyeing method commonly associated with the country of Indonesia and, specifically, the island of Java. Designs are created by using wax to prevent dyes from penetrating the fabric, leaving undyed areas. This can be repeated over and over to create complex and multicolored designs.

Damask: A patterned textile, deriving its name from patterned fabrics produced in Damascus, Syria. Originally it was made of only silk, but it has become the name for a type of patterned fabric regardless of fiber.

Houndstooth: Originally worn by shepherds in the Scottish Lowlands, the pattern got its name because of its resemblance to the shape of a dog’s tooth. Typically seen in black and white, it consists of irregular pointed squares.

Paisley: Iraq is believed to be where paisley originated. Paisley can best be described as a curved teardrop or kidney.

Suzani: A hand-embroidered textile made in the central Asian countries of Tajikistan, Uzbekistan, and Kazakhstan. These large textile panels are an integral part of the nomadic tribal cultures of the area.


Wax prints: A method that has become associated with West Africa originated as an attempt by the Dutch to mass produce Indonesian batik. While the Indonesian markets were not receptive to the distinct crackling of wax prints, it was very popular along the West African trade route and has become a staple of West African fashion.

Yuzen silk: Yuzen refers to a traditional Japanese technique of dyeing silk fabrics for kimonos or products made with the technique.

Warm-up (5 minutes):
1. Ask youth to examine their own clothes. Identify any patterns and the names of those patterns.
2. Ask youth if they know where those patterns originated. How can they find that information?

Activity 1: “I Have Seen This Before” (30 minutes)
1. Divide youth into groups of two to three.
2. Distribute the eight sample cards in the appendix randomly to the groups.
3. Have groups brainstorm where they have seen these patterns before.
4. Tell youth to write those places on the back of the sample.
5. Now introduce each pattern to young people using the background information.
6. Have groups switch sample cards and add to the lists on the back until every group has had a chance to see all the sample cards.
7. Assign each group one pattern and ask them to find out everything they can about it (provide internet access and supplies for young people to use their creativity).
8. Allow each group to share what they discovered with the whole.
Activity 2: Quilting the World (20 minutes)

This is an individual activity that allows young people to use the patterns they have explored while learning about a traditional Kentucky art.
1. Provide each young person with four sets of the sample cards.
2. Explain to young people that quilting is an important part of Kentucky culture and history. It was an important craft when electric or central heat was not available and we could not easily buy blankets, bedding, and quilts.
3. Point out that the National Quilt Museum is in Paducah, Kentucky.
4. Introduce the two common quilt block patterns “nine patch” and “log cabin.”
5. Provide young people with four eight-inch-square pieces of cardstock, glue, scissors, and a 16-inch-square foam board.
6. Have young people create four quilt blocks that are either a log cabin block or a nine-block quilt block out of the samples they have.
7. Encourage them to create something that they both like and somehow tells a story.
8. Have youth put the four blocks together on the foam board to create a small quilt.
9. Ask for youth volunteers to share their quilts.

Reflect and Apply
Ask youth to consider what story the patterns in their own closets tell and what patterns would represent their own culture.

Supporting Projects/Events
Kentucky 4-H International Programs provide various experiences for youth and families to open their home to the world:
• International Summer Short-Term Program (inbound to U.S.)
• International Summer Short-Term Program (outbound from U.S.)
• Academic Year Program (inbound to U.S.)
• Kentucky 4-H International Service Learning Program

Expand Your Experience
• Explore the history behind other textiles.
• Create a demonstration or speech on how textiles have shaped world history.
• Participate in the Creating Fashion/Expressing Self Program.

Learn more at www.kentucky4h.org or contact your county Extension office.
References
The History of Houndstooth (February, 2015). https://scadconnector.com/2015/02/02/history-houndstooth/

Authors
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Rachel Guidugli, Ed.D., Extension specialist for 4-H Youth Development
Ashley Osborne, M.S., Extension specialist for 4-H Youth Development
Misty Wilmoth, Ed.D., Extension agent for 4-H Youth Development
Appendix

Batik

![Batik](image)


Damask

![Damask](image)

Victoria & Albert Museum
http://collections.vam.ac.uk, English furnishing fabric, 1750
Houndstooth

Victoria & Albert Museum
https://collections.vam.ac.uk, Textile ca. 1855

Paisley

**Suzani**

“Suzani (Boukhara, Ouzbékistan)” by dalbera is licensed under CC BY 2.0.

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**Toile**

“Toile” by PinkMoose is licensed under CC BY 2.0.
Wax Print

“Anibere a enso gya fabric” by Naa2Darkoa is licensed under CC BY-SA 4.0.

Yuzen Silk

“File:Kimono (AM 17064-5).jpg” by Unknown author is licensed under CC BY 4.0.
Nine Block
TIME NEEDED

- 50 minutes, depending on skill level

SKILL/GRADE LEVEL

- The intention of this lesson is to be utilized for any grade level with modifications based on the needs of the audience.

CORE AREA

- Agriculture
- Family and consumer sciences

LIFE SKILLS

- Thinking
  - critical thinking
- Giving
  - responsible citizenship
- Relating
  - accepting differences
  - social skills

EDUCATIONAL STANDARDS

- National 4-H mission mandates

CORE CURRICULUM

- Kentucky 4-H family and consumer sciences

This is the fifth lesson of the Kentucky 4-H agriCULTURE program. For the objectives, please see the introduction section of the first lesson.

Materials Needed

- Internet access
- World map
- Various textile items (optional)
- Assortment of garments that are made from different fabrics and from different geographic locations
- Markers
- Star stickers
- Posters/flipchart

Introduction

The United States textile industry is big. It employed around 529,000 people in 2020, and the U.S. government estimates that one textile job in this country supports three other jobs. As the world leader in textile research and development, the U.S. textiles industry has developed next-generation materials such as conductive fabric with antistatic properties, electronic textiles that can monitor heart rate and other vital signs, and antimicrobial fibers. Over 8,000 different products made by the textile industry in the U.S. are supplied to the U.S. military, and the U.S. textile supply chain exported to more than 200 countries in 2020 (National Council of Textile Organizations, 2020).
Background Information

Textiles

- Textiles are materials that are manufactured from fibers or yarn (University of Manchester, n.d.).

Fibers

- Natural: Either plant-based (cotton and flax) or animal-based (wool and silk)
- Regenerated: Fibers that are derived from natural fibers and undergo an intensive chemical transformation process (rayon).
- Synthetic: Human-made fibers such as polyester. Most of these fibers are oil byproducts.

Additional Textile Resources

- Books
  - *The Fabric of Civilization: How Textiles Made the World*
  - *The Textile Manual*
  - *All New Fabric Savvy: How to Choose and Use Fabrics*

Instructions for Warmup (5 minutes)

- Ask youth to define textile. What does this word even mean? (Textiles are materials that are manufactured from fibers or yarn.)
- Ask youth if they can think of some examples of textiles. Encourage them to think beyond their clothes. (Examples may include car seats, couches, landscape fabric, reusable bags, curtains, and pillows.)

Adaptation: Have items available and spread out. Ask youth to determine how or if the items are connected (for example, they all are made of cotton, all are for winter use, or all have the same country of origin, all have a shared color).

Instructions for Exploring Clothing: a World Adventure (20 minutes)

- Divide youth into groups of two to three.
- Pass out to youth the clothing items you have brought.
- Have youth record the types of fiber (examples include cotton, silk, polyester, and wool).
- Give each group a world map and markers.
- Have groups select three types of fiber from their garments and look up the top three producing countries of that fiber on the internet. Using markers, color the countries that produce that fiber. (Use a different color marker for each fiber.)
- Have youth put a sticker on the map where they live.
Instructions for Connecting Farm to Fashion (20 minutes):

For this activity, we are going to look at natural fibers, using cotton, flax, jute, wool, and silk (use less or more, based on your group). Have examples of raw fiber and finished products; these products can be reused from the first activity.

1. Assign youth one of the five fibers as either a producer, manufacturer, or distributor.
   a. Producer: one who grows agricultural products or manufactures crude materials into articles of use
   b. Manufacturer: one who engages in the act of producing something from raw materials
   c. Distributor: one who coordinates the movement of product from one point to another

2. Pass out posters and markers.

3. For youth who are producers, have them research and create a poster that displays the production process of the fiber. Some possible prompts to help youth are:
   • What crop is this fiber produced from?
   • What other products come from this same crop?
   • Who plants it?
   • Where is it produced?
   • What is the climate?
   • What is its season?
   • Are special tools needed?
   • How long is the growing time?
   • What issues or risks do producers have to take on?

4. For youth who are manufacturers, have them research and create a poster that displays the manufacturing of the fiber. Some possible prompts to help youth are:
   • Where are manufacturers located?
   • What tools are needed?
   • How many steps are in the process?
   • How labor intensive is it?
   • What is the environmental impact?

5. For youth who are distributors, have them research and create a poster that displays the distribution of the fiber. Some possible prompts to help youth are:
   • What are some methods of distribution?
   • What careers are part of distribution?
   • Where are the major production centers in relation to the consumption centers?
   • What is the environmental impact?

6. Ask for youth to volunteer to present their posters.
Wearing Culture

Reflect and Apply

Ask youth to consider the global supply chain that goes into delivering one item of clothing to a store. In groups, ask them to come up with careers they could explore in the textile industry.

Expand Your Experience

- Explore the global supply chain of garments in your own closet.
- Consider touring a clothing mill.
- Participate in the Creating Fashion/Expressing Self Program.
- Investigate farming fibers in your climate zone.

References


Authors

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Learn more at www.kentucky4h.org or contact your county Extension office.
This is the sixth lesson of the Kentucky 4-H agriCULTURE program. For the objectives, please see the introduction section of the first lesson.

Introduction to Content

Through previous lessons in the agriCULTURE curriculum, youth made connections between themselves, the food they eat, the fiber they wear and use, and their world. Traditions are an important part of our culture. Our geographical location, as well as our family traditions, affect many of our personal experiences. Youth have learned about interdependence and influences as they relate to food and fibers.

Now they will relate those back to their own personal families and traditions. Most of us can share special personal stories about certain holidays or events and the foods that we associate with them. Many of these special foods focus around our families.

Materials Needed

- Index cards or other paper
- Markers
- Sticky notes (15 per person)
- Flip chart paper
- Tape
- Embroidery floss in various colors

Introduction (5 minutes)

- Families are often connected with traditions that focus around food. Whether it is the Fourth of July cookout with burgers and hotdogs or the Thanksgiving meal with the traditional turkey dinner, family memories often connect us to certain types of foods that we have grown to love. Recipes connect families and should be preserved (Frey, 2015).
- Begin by sharing with youth a personal story of how food has been a part of family traditions for your family, or lead a general discussion on the topic of family food traditions.
- Questions to ask:
  - Food is essential for life, but how else is it important to your family? Is food an essential part of gatherings in your family?
  - What family food traditions does your family have?
  - Do you know of friends who have any special family traditions that revolve around food?
Activity 1: Family Food Traditions (15 minutes)

- Ask youth to think about some of their own family traditions that include food and decide on the one that stands out the most to them. It could be their favorite food or possibly a favorite holiday or memory.
- Hand out index cards and markers.
- Depending on the size of the entire group, divide youth into smaller groups of five or fewer people.
- Ask youth to reflect back on that one holiday or event. What about this particular day stands out? What food or foods have they selected that are connected to that holiday or event in their families?
- Ask youth to write down notes that describe the day or event they selected and the food that goes along with it. Ask them to be very descriptive and also include how it makes them feel. Who does it include? Was it a one-time event, or is it an annual tradition? What things stand out to them the most: visuals, tastes, smells, etc.?
- Ask youth to share their experiences within their own smaller groups. Allow time for sharing.
- Ask each smaller group to share one example with the entire group.
- Discuss if there were any similarities or differences in the selections.
- What are some of the common themes? Were certain foods or holidays chosen more often than others?
- Make a connection to the next activity. We have shared some personal experiences related to holidays and food traditions. Next, we will determine, as a group, what foods we connect with certain days.

Activity 2: Holidays and Food (15 minutes)

- Give each person 15 sticky notes. Hang up a flip chart page with a label at the top for each of the following: Christmas, Thanksgiving, Easter, Fourth of July, and New Year’s Eve/Day.
- Have each person work independently, writing a different food that they relate to each of the five holidays listed above on each sticky note. Ask each person to write down three foods for each holiday. These should be the first three foods that come to mind when thinking of that holiday. It does not necessarily have to be the person’s favorite foods, but simply foods that the person associates with that day.
- After all participants have written on all of their sticky notes, have them place the notes on the large flip chart paper for each of the holidays with which they are associated.
- Begin with one of the holidays and sort the foods, putting together the ones that are the same. Do this for each of the five holidays.
- Discuss the most popular foods listed for each holiday and ask youth why they selected the ones they did. What makes them associate those foods with that particular holiday? Those with unusual choices may share stories about the foods, if they wish.
- Ask youth to share about any foods associated with a different day that was not discussed. Is there another day they wish had been on the list? For example, do they have favorite Super Bowl party foods, etc. This will allow youth to discuss any days that are important to them that may have not been on the list.
Activity 3: Fiber and Families (20 minutes)

- From the time we were babies, many of us have connected with a certain blanket or favorite material or item. For some, it is the feel of comfort or warmth provided by the item, while for others it might be who made or bought the special item for them.
- Ask participants if they recall having special blankets, stuffed animals, or other items that were important to them as children.
- Ask if anyone would like to share about a remembered item and tell the group why it was special.
- Materials are made of fibers that are woven together, just as our culture is woven into our lives.
- Have participants create a friendship bracelet symbolizing how we are all woven together, using a variety of colors of thread. Many different friendship bracelet patterns are available with instructions online. A simple pattern called the Chinese Staircase bracelet uses three or more colors of thread and simply alternates colors. An overhand loop is used and tightened to create the design. Bracelet sizes vary, depending on the size needed for the wrist or ankle. Colors may also vary, depending on preference. In the American culture, friendship bracelets are given as a gesture of kindness toward another person. The gift shows generosity but also a connection between the two individuals. Some individuals like to make matching friendship bracelets to each wear as a reminder of the other person.

Reflect and Apply (10 minutes)

- Food and fiber are important to families. Families are often brought together through the meals they eat. Fibers may also be passed down from generation to generation in a special item such as a wedding dress or baptismal gown, or even a quilt handmade by a great grandmother.
- Reflect on the food and fibers that are important to you and your family.
- As an extended activity, talk with family members about traditions and the stories behind the recipes or quilts hanging or displayed in their homes. Many traditions in our culture are passed down from generation to generation. Take time to talk to family members so that you are sure to know the stories that are special to your family. You may even want to make a video of yourself asking a relative about a food or fiber item that is special to your family.

Learn more at www.kentucky4h.org or contact your county Extension office.
Resources

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Supporting Projects/Events
Kentucky 4-H provides additional experiences for youth to explore the world:
- International Summer Short-Term Program (inbound to U.S.)
- International Summer Short-Term Program (outbound from U.S.)
- Academic Year Program (inbound to U.S.)
- Kentucky 4-H International Service-Learning Program
- Kentucky 4-H State Fair Projects: agriculture, horticulture, home environment, clothing, and textiles