

STIRRING UP AGRICULTURE

WITH FINDING GRANDMA'S SPOON

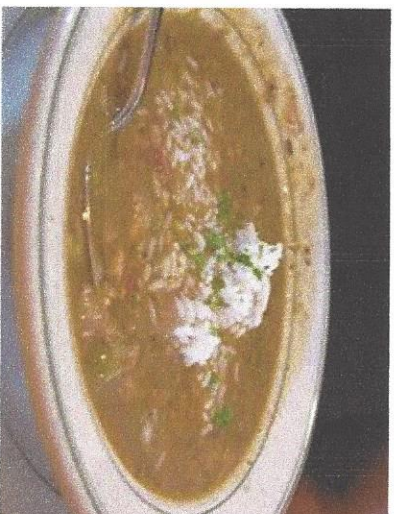
PRESENTERS: JO ANN HEBERT

CATHERINE OLINDE

The Gumbo Pot is the entire unit.

Finding Grandma's Spoon is the closing activity for the Gumbo Pot.

The Gumbo Pot



Jo Ann Hebert

Catherine Olinde

Louisiana

Objective/Agenda

- The Gumbo Pot is a series of activities used to explore Louisiana products grown and harvested on the farm or harvested from our natural resources. Our project begins with a brief history of gumbo and how the name came to be.....

- Our students will explore products grown in Louisiana and Pointe Coupee Parish. The students will bring in a recipe and decide which

What is gumbo?

In Louisiana, gumbo is a stew or soup. It usually has meat or shellfish and vegetables. There are three types of gumbo: **okra**, **file** and **roux**. Okra, file' and roux are used to make gumbo thick.

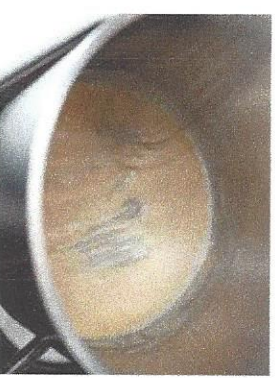
The History of Gumbo

Gumbo is typically divided into two varieties, Creole and Cajun. “Creole” after the Louisiana Creole people, descendants of French and Spanish settlers who lived in New Orleans and southeastern Louisiana and “Cajun” descendants of French-speaking settlers who were run out of Acadia and lived in southwestern Louisiana. Creole gumbo most often has seafood, tomatoes and a thickener. Cajun gumbo has a dark roux, and file’ is usually used

Gumbo Definitions

roux-made by mixing equal amounts of flour and oil, cooking it until it is dark brown in color.

Used to make gumbo thick.



okra-is an African vegetable. It is believed by some that okra was brought to American by slaves during the early 1700's. Creoles learned about okra from the slaves.



file'-is made from ground sassafras leaves. It was used as a medicine by the Choctaw Indians of Louisiana, Mississippi and Alabama. It was also used as a way to make gumbo thick.

Sassafras-trees grown in Louisiana. Leaves are used to make file'.



Gumbo Types

Questions that students will ask themselves to decide which type of gumbo recipe they have brought in for research.

1. Does my gumbo recipe have roux in it? (oil and flour)
2. Does my gumbo recipe have okra in it?
3. Does my gumbo recipe have file' in it?
4. What type of gumbo recipe do I have?

Student Recipes – Lesson 2 (recipes)

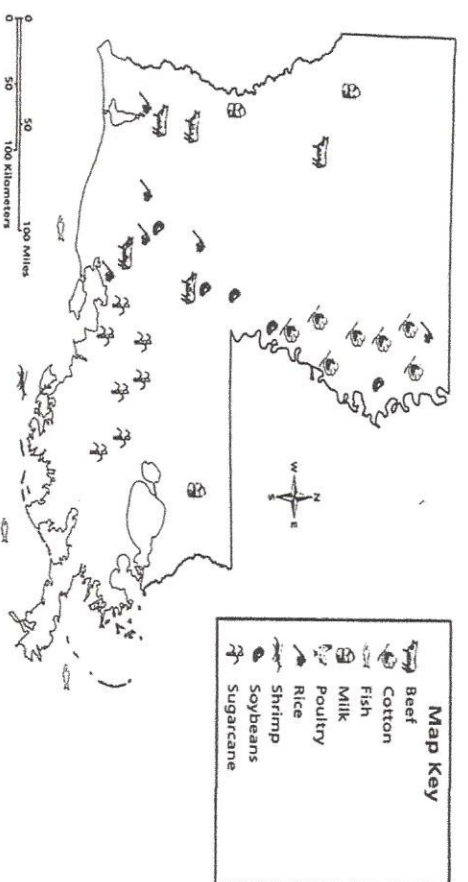
Students bring in any gumbo recipe
from home.

In groups of three, the students
decide what types of gumbo their
recipe would make. Okra? File'?

Roux?

Louisiana Products – Lesson 3

(where can they be found?)



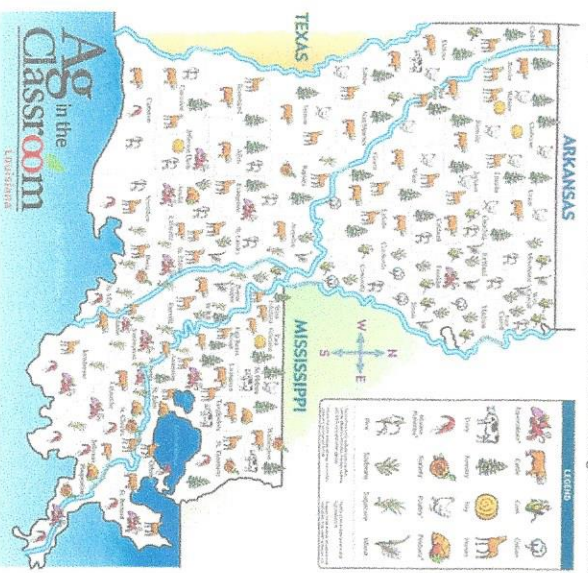
Louisiana's Agricultural Resources

1. Which part of Louisiana is sugarcane resources found?
 - a. northern
 - b. southern
 - c. western
 - d. eastern
2. According to the Map Key, which resource is not found in Louisiana?
 - a. poultry
 - b. cotton
 - c. beef
 - d. soybeans
3. Does Louisiana have more resources of cotton or milk?
 - a. milk
 - b. cotton
4. Is cotton produced more in the northern or southern part of Louisiana?
 - a. northern
 - b. southern

Where are the products located?

LOUISIANA'S AGRICULTURE

The top commodities produced in each parish, based on the 2008 gross farm value



Category	Sub-category	Count	Percentage	Mean	SD
HIV/AIDS PATIENTS	ACUTE	41	31	34	44
	CHRONIC	63	48	36	44
	UNKNOWN	21	16	35	44
	TOTAL	125	95	35	44
NON-HIV/AIDS PATIENTS	ACUTE	21	16	34	44
	CHRONIC	31	24	36	44
	UNKNOWN	74	57	35	44
	TOTAL	126	97	35	44
COMPARISON OF HIV/AIDS PATIENTS AND NON-HIV/AIDS PATIENTS					
ACUTE					
Gender	Male	21	100%	34	44
Female	0	0%			
CHRONIC					
Gender	Male	31	100%	36	44
Female	0	0%			
UNKNOWN					
Gender	Male	74	100%	35	44
Female	0	0%			

[illegible]

What are Louisiana Products (map

This is a list of crops grown in ^{skills}Pointe à la Pêche Parish.

Cotton	Cabbage
Forestry	Cantaloupe
Christmas Trees	Carrots
Strawberries	Cauliflower
Corn	Collards
Grain Sorghum	Cucumber
Oats	Eggplant
Tomatoes	Garlic
Hay	Irish Potatoes
Pecans	Lima Beans
Rice	Mustard
Soybeans	Okra
Sugarcane	Onions
Beets	Bell Peppers
Broccoli	Pumpkin
Green Onions	Shallots
Snap Beans	Southern Peas
Spinach	Squash
Sweet Corn	Turnips
Watermelon	Wheat
Crawfish	Alligators

Ag Product Sheets – Discuss La Products and continue with map skills

CORN

A COMMODITY FACT SHEET COMPILED BY THE LOUISIANA AG IN THE CLASSROOM PROGRAM

HISTORY

Corn is a grass native to America where the people in Central Mexico cultivating it at least 7,000 years ago. Corn was a staple in the diet of many Indian groups. They used all parts of the corn. The early farmers were used as a sort of chewing gum, immature corn was their vegetable and dry, mature kernels were ground into flour.

Today, corn is grown on every continent except Antarctica. Corn is the No. 1 grain crop in the United States. Most corn grown in the U.S. is a variety called field corn or dent corn, which is used as livestock feed and processed into a variety of products. The corn used to eat is called sweet corn.

PRODUCTION

Corn is planted in the spring from a seed called a "kernel." The seed will grow into a stalk which then produces ears of corn. The ears of corn mature over two summers. When they are ready to harvest, in late August or early September, they are cut down to the ground. Producers use a machine called a combine to harvest the corn.

Once in the combine, the ears enter a sheller. The sheller is a metal cylinder that rotates at a high speed and removes all husks and kernels from the cobs. The corn is then loaded onto trucks and transported to a nearby grain elevator. The corn is stored at the elevator in bins until it is sold and shipped out for processing.

An ear of corn averages 800 kernels in 15 rows. An acre of corn yielding 100 bushels produces approximately 7,280,000 kernels.

PRODUCTS

There are more than 3,600 different uses for corn. Primary products are cornstarch, sweetcorn, food and industrial forms.

There are many edible uses for corn including popcorn, mushmashions, ice cream, cereals, corn chips, cornmeal, baking mixes and more.

Some non-edible products that can be made from corn include ethanol, back filling, oil, glue, shoe polish, cosmetics, fireworks, paint, paper, crayons, chalk, biodegradable soap, candles, balloons and charcoal. There are more uses being found every day for corn.

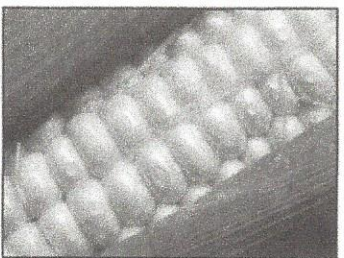
NUTRITION

Corn is a member of the vegetable group. Everyone should have 3-5 servings from this group each day. Corn is low in fat and calories and provides almost three grams of dietary fiber per ear. The starch found in corn is a carbohydrate.



FOR MORE INFORMATION:

Louisiana Ag in the Classroom
9516 Airline Highway
Baton Rouge, LA 70815
P: (225) 922-6503
F: (225) 922-6229
E: lynchad@lila.org
http://www.lila.org/files/commodity_handout_sheets.pdf



SOYBEANS

A COMMODITY FACT SHEET COMPILED BY THE LOUISIANA AG IN THE CLASSROOM PROGRAM

HISTORY

Soybeans date back 5,000 years ago to China. The Asian legume was cultivated from its wild state into a food crop. Soybeans first came to the United States in 1814, arriving aboard a ship from China.

By the mid-1800s, farmers were growing soybeans as food for their livestock. By the 1900s, soybeans were grown on American farms as a food crop. At that same time, extensive research began on the bean.

George Washington Carver's work changed the way people thought about soybeans. It became much more than a food crop when it was discovered there was value in the protein and oil. It was in the 1940s that soybean farming really took off in America. World War II disrupted bean fields in China and U.S. farmers filled the gap. Henry Ford saw soybeans as a boon to various industries and made plastic for cars and other uses. The United States is now the No. 1 producer of soybeans in the world. We use about one-half of all the beans we grow, so we also are a large exporter of the beans. In Louisiana, soybean acreage remained small until the 1960s. Most of the acreage today is concentrated on the Atchafalaya river south of Natchitoches and Calumet Laumiere. The crop is well-suited to Louisiana because it can grow to a wide variety of soil types.

PRODUCTION

The soybean plant is a legume. A legume is a plant that has nitrogen-fixing nodules on its roots. The plants help replenish the nitrogen in the soil. Soybeans are a summer annual planted in May or early June. It usually takes 75-85 days for the beans to fully mature. Mature plants may reach a height of three feet. When mature, the soybean begins to shed and the leaves fall away. They are ready to harvest in September or October. Harvest must be completed before the bean pods have open. All harvesting is done by machine. The harvested beans are taken to a storage bin with a dryer. The beans are dried to reduce the amount of moisture they contain so the beans will store well for long periods of time.

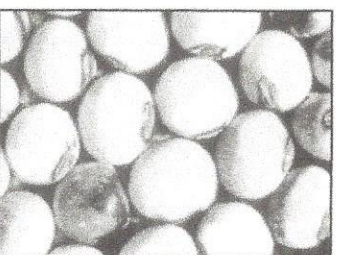
PROCESSING

During processing, soybeans are first ground, cleaned, cracked, de-hulled, and rolled into flakes. The flaking ruptures the oil cells in the bean, which makes extracting the oil easier. Once the oil is removed, the flakes are processed into soy protein products or used to produce animal feed.



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Ag Sheets cont.

CRAWFISH

A COMMODITY FACT SHEET COMPILED BY THE LOUISIANA AG IN THE CLASSROOM PROGRAM



HISTORY

Native Americans in the area were the first credited with harvesting and consuming crawfish even before the Cajuns arrived on the scene. They used to bait nets with yucca (later meat), stick them in the water and periodically pick up the nets with crawfish attached to the bait. By using this method, the Native Americans would catch hundreds of crawfish for their consumption. History records show that significant populations in New Orleans in the late 1700s used small ponds to grow crawfish. Although crawfish had been consumed for centuries by both native Americans and Europeans, commercial sale of crawfish in Louisiana only began in the late 1800s. At that time, supplies of wild crawfish were harvested from the natural waters of the Atchafalaya Basin.

During the 1930s, with the development of improved harvesting and cold storage, crawfish markets in Louisiana shifted from local consumption in rural areas to metropolitan areas such as Baton Rouge and New Orleans. During this same period, the adoption of crawfish traps resulted in much more efficient harvest methods.

By the 1950s, the crawfish trap was widely used and the practice of releasing rice fields after harvest became commonplace as a method to produce crawfish for harvest during the autumn, winter and early spring. The practice of crawfish farming eventually spread to impounded wetlands and marshland as well. By the mid 1960s, acreage had increased to approximately 10,000 acres of managed crawfish ponds. At this point, an industry based on peeling crawfish became established, which in turn fueled further expansion of both crawfish farming and wild harvests. Acreage continued to increase, from approximately 44,000 acres in the mid-1970s to current levels of roughly 116,000 acres. In 2006, the crawfish harvest in Louisiana increased to about 70 million pounds of pond-raised crawfish and 8 million pounds of wild crawfish.

Limited harvests of farmed crawfish occur in other states, such as Arkansas, South Carolina and Texas. Official estimates are not available, but industry estimates suggest that Louisiana typically accounts for 90 percent of total U.S. production, depending on the season in question.

FACTS

Crawfish (Decapod crustaceans, class), also called crayfish, crawdads, and mud bugs, are freshwater crustaceans found on every continent except for Africa. In appearance they greatly resemble the lobster, but are much smaller. Crawfish range in size between 3 to 10 inches depending on the species and the location. They grow throughout a series of molts by which they shed their exoskeleton and produce a new one. A crawfish molts double its size with each molt.

Ag in the Classroom Louisiana

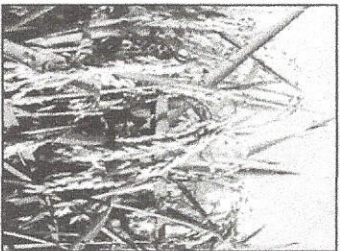
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P: (225) 922-6503
F: (225) 922-6229
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RICE

A COMMODITY FACT SHEET COMPILED BY THE LOUISIANA AG IN THE CLASSROOM PROGRAM



HISTORY

Rice has fed more people over a longer period of time than any other crop. Rice cultivation has been documented as far back as 2800 B.C. Beginning in China, its cultivation spread throughout Sri Lanka and India. It then passed on to Greece and across the Mediterranean.

Rice traveled to the New World from Europe. The history of rice in North America began with its colonization. Sir William Berkeley of Virginia first grew rice on a large scale in 1647. It was then successfully introduced into the Carolinas. By the time America gained its independence, rice was one of the country's major agricultural businesses. The Civil War destroyed most of the farms in the east. Rice production then moved westward. At the turn of the 20th century, rice was well established in what are today's major Southern rice growing states - Arkansas, Louisiana, Mississippi, Missouri and Texas. In 1969, the discovery of paddy in California brought people of all regions to this U.S. territory. To feed the many Chinese immigrants whose staple food was rice, California also started its own rice production.

In Louisiana, rice was first introduced in 1715 by French engineers. It wasn't until the 1800s with the coming of the railroad and discoveries made by Dr. Seargent A. Knapp that rice production took off in the state. Settlers moved in, bought land, and put it into rice production.

Technological advances in farm machinery and irrigation brought much rice farming profitable. By the 1900s, Louisiana produced more than half the rice in the United States. A very special combination of climate and terrain is necessary to produce the high quality rice for which the U.S. is known. This special combination exists in Arkansas, Louisiana, Mississippi, Missouri, Texas and California.

PRODUCTION

First, rice farmers prepare their soil for planting. Special equipment is used to sub the soil and level and smooth the field. Small levees within water on the flooded fields at a uniform depth. Levees are slightly tapered to allow the fields to be drained when needed. Either grain drills or airchutes plant rice in the early spring. Green drills plant the seed rice directly into the soil at a consistent rate and depth. Aerial seeding means farmers drop seeds over flooded or dry fields. A good supply of clean water is extremely important to rice farming. Rice seed is treated with two to three inches of water during most of the growing season to inhibit weed growth.

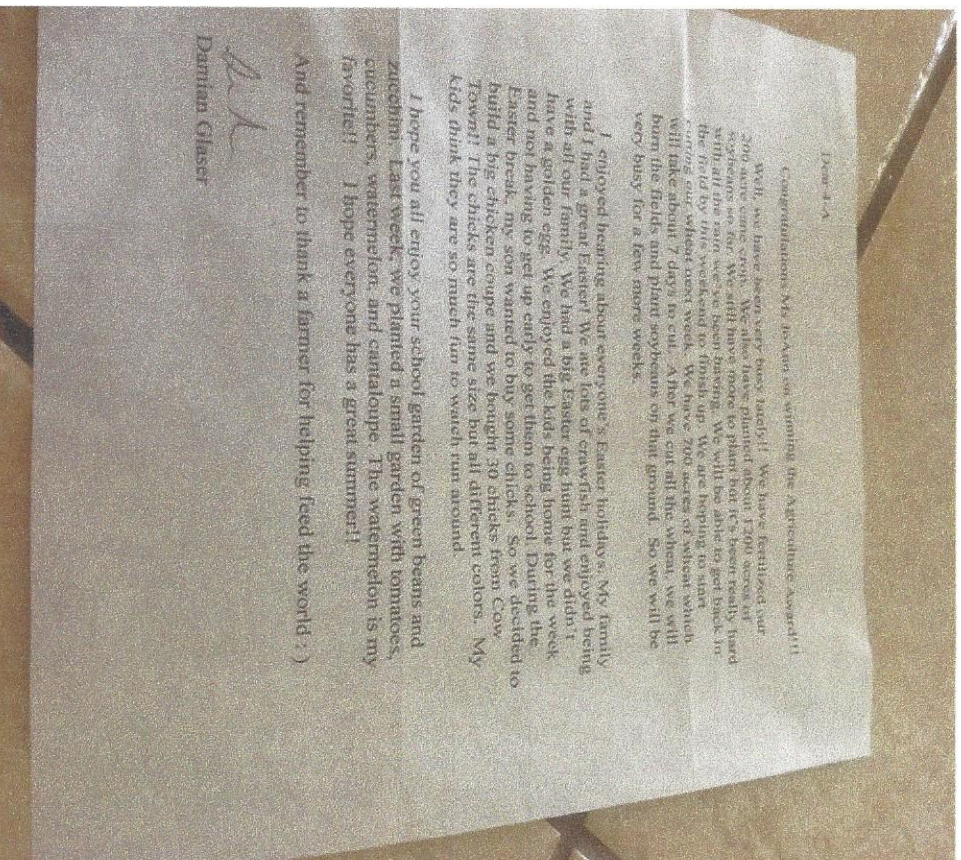
Depending on the variety, rice grows to maturity anywhere from 100 to 160 days after planting. Once the rice is fully mature, the water is drained from the field and combines harvest the rice. This "rough rice" is transported by truck to a rice dryer. Rice dryers are used to remove the moisture from the grain for storage. Once dry, the rice may be safely stored. When rice is harvested, it has a non-edible hull surrounding the kernel.

Match the Plant or Food – Lesson

4 (students are exposed to various crops)

MATCH THE PLANT OR ANIMAL WITH ITS FINISHED FOOD	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	

Letter Writing—Lesson 5 (Class letter to local farmer)



Make file/flour – Lesson 7

(students make file and flour)

How to Make File'

1. Harvest the leaves in the fall;
2. Clean the leaves with water;
3. Dry the leaves and hang in a cool, shady spot;
4. Remove the leaves from the stem when dry;
5. Crush the leaves by hand;
6. Grind the leaves;
7. Sift the ground powder;
8. Store in a jar with a tight lid.



Sasuifras leaves on tree.

To grind leaves with a mortar and pestle:

1. Cut the stems from the leaves;
2. Crush the leaves by hand;
3. Place the crushed leaves in the mortar;
4. Use the pestle and slowly mash and grind the leaves in a circular motion;
5. When the leaves are finely ground sift the powder to remove any pieces of stems;
6. Store in a container with a tight lid.



Three shapes of Sasuifras leaves.

What is a mortar and pestle? A mortar is a bowl that holds the leaves to be ground.
What is a pestle? A pestle is a straight tool with a rounded end used to grind things in the mortar.

Examples of mortars and pestles:



HOW TO MAKE FLOUR FROM WHEAT

In Louisiana, wheat is harvested in April and May. When it is harvested the wheat kernel is removed from the hull in the combine. When the wheat is brought to the mill it is then ground into flour. If the whole kernel is ground the flour is called whole wheat flour. This is what you will be making in class.

1. Using the mortar and pestle place a few grains of wheat into the mortar.
2. Take the pestle and slowly start to press and grind in a circular motion.
3. Keep grinding and pushing the kernels down to the bottom.
4. Continue grinding until all the kernels are ground into flour.

Garden Area – Lessons 8, 9, 10

(students investigate seeds and review proper garden etiquette)



Student Work



Gumbo Project Rubric

Name: _____
Grading Rubric

Research Ingredient: _____

Your project must be displayed on a regular size poster and include the following:

_____ Title of presentation

_____ Copy of gumbo recipe

_____ Pictures of ingredient you are researching

_____ Answers to the following questions:

_____ Is your ingredient a Louisiana product?

_____ When is your ingredient harvested or hunted?

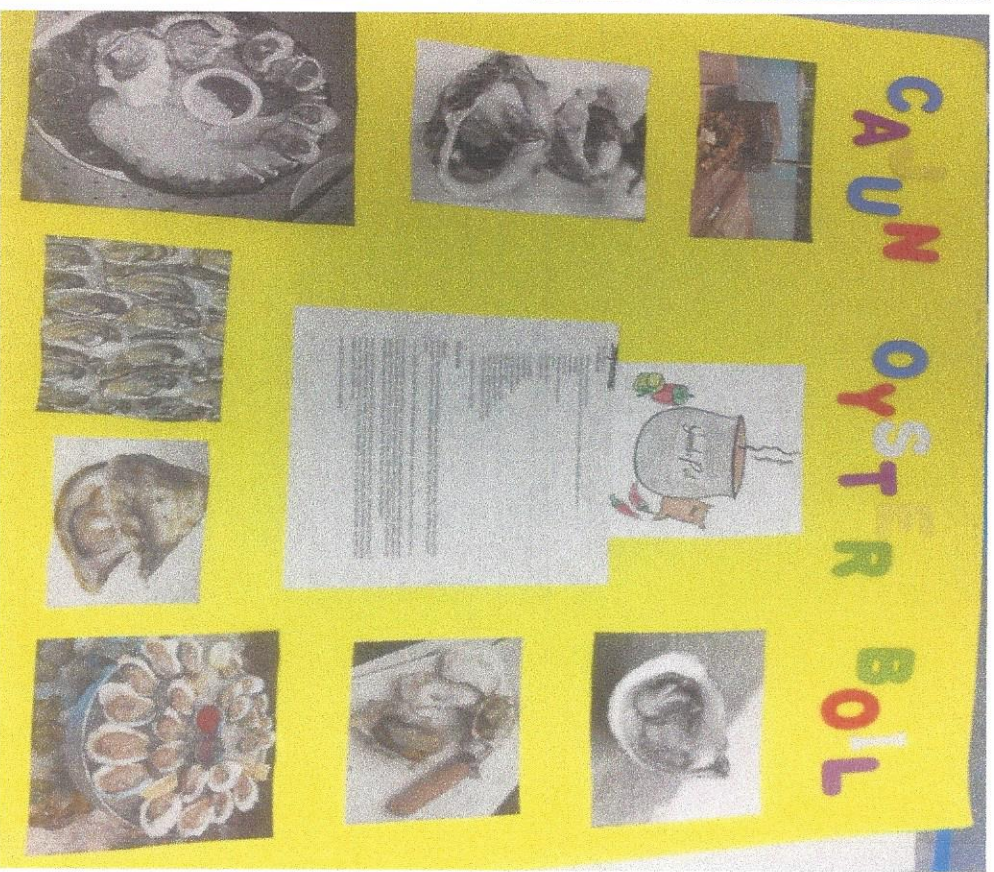
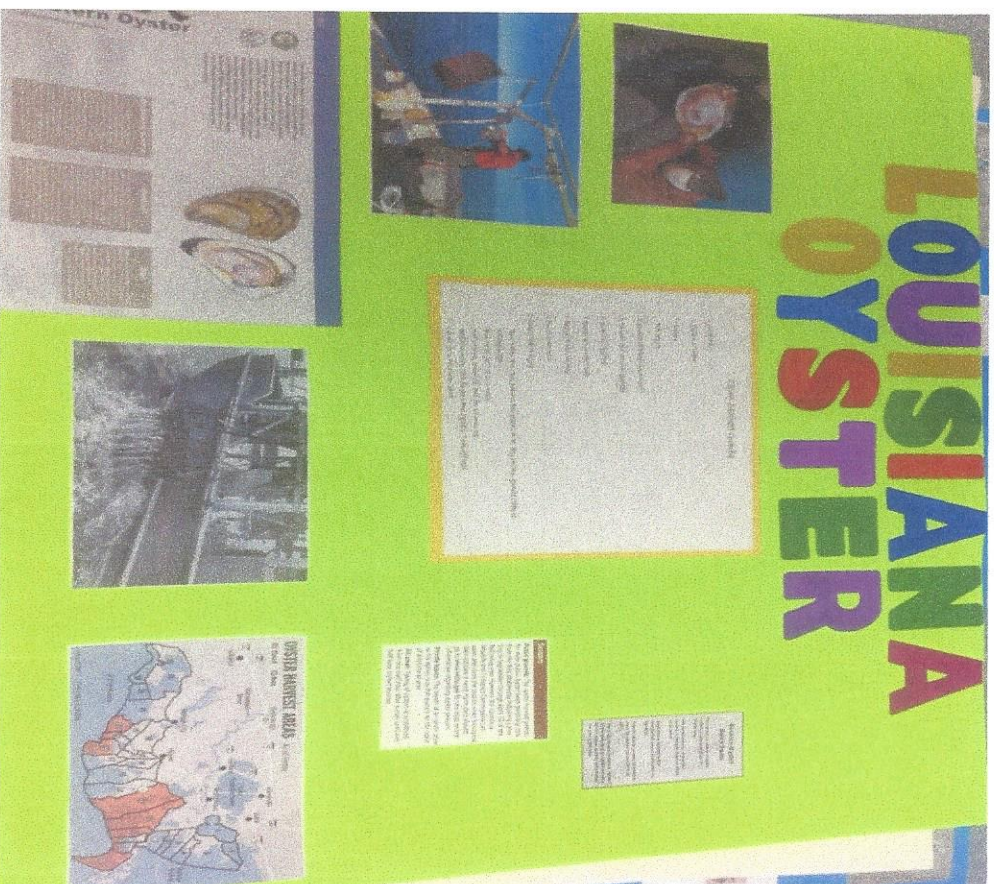
_____ Where in Louisiana is your product grown/produced?

_____ Other important facts about your product. (At least 1 other fact)

Due: _____

Dear
Parents/Gu
ardians,
Our fourth
graders are

Student Projects/Presentations



Review/Written Assessment

The Gumbo Pot-Louisiana Agriculture Review

1. _____ is the process of growing and harvesting living things, like crops and livestock.
2. Agriculture provides you with _____ for clothes, _____ for your body, and _____ for shelter.
3. Crops like tomatoes, rice, and wheat are _____.
4. Resources like shrimp and crabs are _____.
5. Farmers and fishermen make a living by _____.
6. Most crops are harvested by _____ today.
7. The state food of Louisiana is _____.
8. Gumbo is a stew or soup, thickened using _____, _____, or _____.
9. Okra is a vegetable originally from _____.
10. File' is made from ground _____.
11. A _____ are tools used to grind leaves or grains.
12. The mortar is the _____.
13. The _____ is a straight tool with a rounded end.
14. _____ is made from a mixture of flower and oil.

Name: _____ Class: _____ Date: _____

Id: A

The Gumbo Pot - Louisiana Agriculture

Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. Agriculture provides you with _____.
a. fiber for clothes
b. food for your body
c. materials for shelter
d. all of the above
2. What is the state food of Louisiana?
a. crawfish
b. gumbo
c. oysters
d. roux
3. In Louisiana, gumbo is a _____.
a. stew or soup
b. style of dance
c. made up word
d. seafood
4. What are the three ingredients commonly used to make gumbo thick?
a. rice, sausage, chicken
b. seafood, tomatoes, file'
c. okra, file', and roux
d. Creole and Cajun
5. Where do the products in gumbo come from?
a. the grocery store
b. harvested from natural resources or grown on farms for sale
c. factories
d. other countries
6. What is file' made from?
a. wheat
b. ground sassafras leaves
c. okra
d. rice
7. What continent is okra originally from?
a. Africa
b. North America
c. Europe
d. South America
8. Farmers and fishermen make their living by _____.
a. selling the commodities they cultivate or harvest
b. buying food at the grocery store
c. keeping all of their crops to themselves
d. harvesting from natural resources
9. Commodities like wheat, tomatoes, and rice are usually _____.
a. grown on farms
b. harvested from natural resources
c. harvested from natural resources
d. harvested from natural resources
10. Commodities like shrimp and crabs are usually _____.
a. grown on farms
b. harvested from natural resources
c. harvested from natural resources
d. harvested from natural resources
11. What tool is used to grind sassafras leaves or wheat into fine powders?
a. food processor
b. grinder
c. blender
d. mortar and pestle
12. The mortar is the _____.
a. bowl
b. straight tool with a rounded end
c. straight tool with a rounded end
d. straight tool with a rounded end

Subject Areas covered:

- **ELA**- Letter writing to local farmers
- **Math**-measurement of seeds, weight of products, customary measurement in recipe, double and triple recipe
- **Science**-seeds, germination, sprouts, root vegetables, pollination
- **Social Studies** – map skills

Common Core/GLE's (fourth grade)

- MA.4.CCSS.Math.Content.4.NF.A.2
- MA.4.CCSS.Math.Content.4.NF.B.3b
- LA.4.CCSS.ELA-Literacy.W.4.1a
- LA.4.CCSS.ELA-Literacy.W.4.4
- LA.4.CCSS.ELA-W.4.3c
- LA.4.CCSS.ELA-Literacy.W.4.3d
- LA.4.CCSS.ELA-Literacy.W.r.3b

Resources

Books:

Grandma's Gumbo – Written and Illustrated by Deborah Ousley Kadair

Mrs. Spitzer's Garden – Written by Edith Pattou, illustrated by Tricia Tusa

Websites: <http://aitcla.org/>

<http://www.statesymbolsusa.org>

<http://www.brainpop.com/socialstudies/famoushistoricalfigures/lewisandclark/preview.weml>

<http://www.brainpop.com/socialstudies/famoushistoriafigures/napoleonbonapart/preview.weml>

<http://www.brainpop.com/socialstudies/ushistory/westwardexpansion/preview.weml>

[https://www.facebook.com/accorino/](#)

****Final Group Project****
Finding Grandma's Spoon -

- a culminating "Breakout EDU" session with Louisiana products and information
- good luck on the breakout!

