JANUARY

HARVEST OF THE MONTH

Lesson Plans and Activities

School Nutrition Programs
Virginia Department of Education

Harvest of the Month
School Nutrition Programs
Virginia Department of Education

Agriculture in the Classroom℠
AgInTheClass.org

SWEET POTATOES

CONTENTS

INTRODUCTION

Virginia Harvest of the Month (HOM) is a program that promotes eating seasonal foods, increasing fruit and vegetable consumption, and supporting local economies. Sponsored by the Virginia Department of Education, Office of School Nutrition Programs (VDOE-SNP), Virginia HOM provides ready-to-use materials for classrooms and cafeterias to educate children about the joys of eating seasonal, local foods.

In collaboration with Virginia Agriculture in the Classroom and Virginia Cooperative Extension Agents, VDOE-SNP developed nutrition education lessons for secondary students based on the HOM featured item. Additionally, with a select group of Virginia nutrition directors, VDOE-SNP created and tested recipes for school meals highlighting the Virginia HOM featured item. The recipe development team's culinary knowledge and student input were used to create the recipes that correspond with this lesson. Providing nutrition education with student meals creates an opportunity to engage students with how Virginia foods are grown, connect food and wellness, and promote the consumption of the HOM featured item.

In your school cafeteria this month, the recipe: Zesty Breakfast Potatoes will be available. As you learn about the Harvest of the Month in the classroom, we encourage you to connect your classroom activities to the cafeteria and try the new student taste tested and approved recipes!

ACKNOWLEDGMENTS

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LESSON ONE:
THE GEOGRAPHY OF A FALL HARVEST DINNER

Grade Level: Grades 9-12
Lesson Length: 2 hours

Introduction:

In this lesson, students will identify common fall harvest foods and their farm source, determine if those foods can be produced locally, and locate the common origins of their harvest feast.

Objective:

Students will:

- Understand the influence of geography, climate, and culture on food production and availability.
- Understand supply chains and the flow of food from farm to plate.

Related Competencies:

Culinary Arts I, 8275:

- Outline flow of food from grower to buyer
- Identify fruits, vegetables, and farinaceous items.
- Describe the role of food and foodways in the history of Virginia.

Foundations Agriculture, Food, and Natural Resources (AFNR), 8006:

- Examine the history of agriculture in Virginia, the United States, and globally.
- Analyze the effects of agriculture on the local, state, national, and global economy.
- xamine agricultural issues related to population, food, energy, and the environment.

Applied Agricultural Concepts, 8072:

- Calculate food needs for a family.
- List factors that affect the quality of vegetables and fruits.

Materials:

- Computer with internet access, projector, and screen
- Geography of Harvest Feast Dinner food cards, 1 copy per class
- Thanksgiving Dinner Map to project on screen

Engagement Activity:

Inform your students that they are in charge of making the shopping list for a fall harvest feast.

Ask the class to make a list on the board of the foods you will need to prepare a meal. Foods will vary from family to family depending on the students' cultural background. Adjust the meal to fit the needs of the class. Students should also include the ingredients to make each dish. For example, to make pumpkin pie you will need pumpkin, sugar, milk, spices, flour, and butter.

Once the shopping list is complete, inform your students that they will be learning about the geographic origins of their Thanksgiving dinner.

Background:

In this lesson, students will learn more about staple food items found at a traditional Thanksgiving Dinner. Thanksgiving is an American holiday celebrated in November. Its purpose is to celebrate the year's harvest and give thanks. This holiday did not become an annual tradition until 200 years after the pilgrims and Native Americans celebrated the first Thanksgiving. Venison was the meat of the first Thanksgiving feast, not turkey. Pumpkin pie and potatoes were not a part of the first Thanksgiving feast. Many of these foods were indigenous crops that were first grown by Native Americans and later shared with Pilgrims. This lesson provides an opportunity for students to recognize the foods they will likely consume in a traditional fall harvest feast and learn how and where they are likely produced.

As agricultural technology has improved and populations have increased, the agricultural production of our food and fiber has changed to meet the growing and changing demands in our society. Many years ago, the majority of the food in our diet was provided by personal gardens and farms or by local farmers. Most consumers played some part in the production of their food. In contrast, today only a very small portion of our population produces the food for our society. Fewer Americans have first-hand experience with and knowledge of farms and food production.

For some Americans, it is becoming increasingly more important to know how and where their food is produced. Recent growing demand for local and regional food has opened up new market opportunities. Many efforts and initiatives have been established to increase this awareness and improve a local farmer's ability to market their products locally. Locavore is a term used to describe someone who chooses to only consume food that is produced within a certain distance of their home, usually 100 miles. As a whole, consuming locally grown foods is good for local economies. Purchasing local foods, like Virginia sweet potatoes, can also increase agricultural literacy for consumers and help build a greater awareness for where their food comes from.

There are benefits to purchasing local foods and a few limitations. Regional climate plays a huge role in what kind of foods thrive in specific conditions so choosing to eat only locally grown foods may limit access to some varieties of foods. Length of the growing season, soil fertility, access to resources and markets, water, and available open space are key factors in plant growth. Technology increases a farmer's ability to grow crops in less suitable conditions. For example, a greenhouse extends the growing season of produce in a colder climate. However, growing crops in a greenhouse significantly increases the cost of production. Due to this, farms are typically located in geographic locations that have the proper climate and resources to produce a commodity at the lowest cost. After the commodity is harvested, it can be packaged and transported by truck, plane, or train to many locations.

A VIRGINIA Thanksgiving

Here are some geographical facts about the production of common Thanksgiving dinner foods and their ingredients:

Pumpkin: Illinois is the top pumpkin producing state; growing 95 percent of the pumpkins processed in the United States. This vining gourd is rich in beta-carotene and is grown throughout the country for ornamental value at Halloween. Commercial pumpkin growers process and can pumpkin for use in foods such as pumpkin pie and cookies. Watch Libby's 100% Pure Pumpkin from Farm to Can to learn how pumpkins are processed.

Turkey: Minnesota is the top turkey producing state. For more information about raising turkeys, watch the video clip *Visit the Halvorson Turkey Farm* produced by the Minnesota Turkey Grower's Association. Other state statistics can be found on the U.S. Interactive Map.

Cranberries: Wisconsin is the leading producer of cranberries, followed by Massachusetts. Cranberries grow on a woody evergreen vine and prefer acidic soil with a pH between 4 and 5.5. Watch The Life Cycle of a Cranberry Harvest to learn how cranberries are harvested and grown. Craisins are dried cranberries that can be eaten year-round. The peak season for the consumption of cranberries is during the fall and winter months. Cranberries are used in jams, jellies, and cranberry sauce.

Wheat: Kansas is the leading producer of wheat in the United States. Flour is used in many types of baking including breads, pies, and pastries. Flour is a processed form of wheat. Watch the Science Channel's How It's Made-Flour episode for more information about processing wheat into flour. Other state statistics can be found on the U.S. Interactive Map.

Eggs: Iowa leads the nation in the production of eggs. Although all species of poultry produce eggs, chicken eggs are the primary source for human consumption because chickens are most efficient at egg production. On average, a laying hen produces 6-7 eggs per week. Eggs are used in many recipes for their unique culinary ability to bind ingredients together and act as a leavening agent.

Milk: California is the leading producer of milk followed by Wisconsin and Idaho. Aside from fluid milk consumption, milk is processed in many other ways to make ice cream, yogurt, sour cream, cheese, and other dairy products.

Sweet Potatoes: Eastern Virginia's climate and soil conditions are ideal for sweet potato production. Many of Virginia's sweet potatoes are grown on the Eastern Shore. Sweet potatoes are grown across the country, but they are best suited for cultivation in Southern States, which have warmer climates and longer frost-free growing seasons. Watch the America's Heartland video clip, What is the Difference Between a Sweet Potato and Yam?

Green Beans: Wisconsin is the leading producer of green beans.[10] Green Beans can be purchased fresh, frozen, or canned and may be consumed fresh, mixed into a side dish, or baked with other foods.

Corn: Varieties of field corn are grown for livestock feed and ethanol production. The corn typically sold in stores or farmers markets is known as sweet corn. Iowa is the leading state in the production of corn followed by Illinois. The Midwestern region of the United States is known as the "Corn Belt." This area is ideal for the growth of corn due to the fertile soil, relatively level land, warm nights, hot days, and well-distributed rainfall.

Potatoes: Potatoes originate from the Andes Mountains and thrive in high altitude regions with warm days and cold nights. Idaho leads the nation in the potato production.

ACTIVITY ONE:
IDEAL CLIMATE AND GEOGRAPHIC CONDITIONS

Activity Steps:

After completing the Engagement Activity, students should have a general idea of the foods and cooking ingredients typically used at a traditional American Thanksgiving meal. Leave the list on the board for the students to see. Instruct your students to watch carefully. In silence, cross out all foods on the shopping list that are not typically produced within a 100-mile radius of your school. Use your own background knowledge and prior research if necessary to accomplish this task.

Encourage students to think critically by asking them, "What kind of foods did I just cross off?" Allow students time to think and process your question and then offer their ideas. Your goal is for students to recognize that you crossed off foods that are not produced locally. In your class discussion, build upon their comments and provide students with guiding questions such as:

- Where are all of these foods produced? (Farms)
- Do any of these foods require special growing conditions? (Yes)
- Does our climate and geography meet the requirements of growing these foods? (Yes/No)
- Provide a hypothetical scenario for your students. Explain that this Thanksgiving they only have access to foods that can be produced near their home. Grocery stores can only stock their shelves with food that was produced locally.

Note: In this discussion, you should define "near". In most cases, this will be within a 100-mile radius. The Virginia Department of Agriculture and Consumer Sciences (VDACS) website and the Virginia Grown Agritourism Map are good resource to identify farming industries and available products within Virginia.

- Why are some foods unavailable?
    - Answers will vary depending upon the food item and your location. Possible answers may include lack of open space to grow a crop or raise animals, lack of available water, or a climate with a growing season that is too short.
- What factors limit a farmer's ability to grow foods such as grains, fruits, and vegetables?
    - Open space with fertile soil
    - Water
    - Climate and length of growing seasons
- Are there some geographic locations in the United States that are better suited for the local production of food than others?
    - Yes. Geographic areas with fertile soil, moisture, and a temperate climate are likely able to produce a large variety of crops and livestock. These areas can provide a large variety of locally grown food. In contrast, geographic areas with colder climates and shorter growing seasons are limited in the crops they can produce. As a class, determine on a scale of one to ten how suitable your area is for eating only locally produced food.
- Does technology exist that can help farmers produce local food in areas where it can't naturally be grown?
    - Yes. For the production of some plants, greenhouses can significantly extend the growing seasons in colder climates by artificially creating the ideal environment for year round plant growth.
    - In large cities where open space is a limiting factor, vertical gardens and greenhouses can be implemented. Science can also be used to select and use varieties of plants that require shorter growing seasons or that are more tolerant of local temperatures. Aquaponics, hydroponics, and aquaculture are non-traditional methods of producing food using various forms of water, instead of soil, for plant growth. These cultivation methods are being increasingly used in some areas.
- What factors limit a farmer's ability to raise livestock animals that provide meat, milk, and eggs to our diet?
    - Open space
    - Access to affordable feed
    - Close access to markets to sell livestock

ACTIVITY TWO: ORIGINS OF OUR THANKSGIVING FOODS

Activity Steps:

In Activity 1, students gained a basic knowledge of the portion of their Thanksgiving dinner that could be produced locally. In this activity, students will learn the geographic areas in the United States that produce the highest quantities of each agricultural crop or commodity and why.
Explain to students that a farmer's goal is to produce a product that is nutritious and economical for consumers. With these two goals in mind, we will discuss three factors that farmers take into consideration when choosing a location for a farm as well as the farm's overall capacity to grow crops and livestock for our food.
Use the following examples to illustrate geographic and agricultural correlations in the production of our food.

Climate:

Citrus fruits such as limes, lemons, oranges, or grapefruit are a good example of an agricultural crop grown in a specific place to utilize its climate. Ask students if they know where citrus fruits are grown in the United States. Display the Citrus Map for students to see. Point out the map legend so that students recognize the color-coding. They should identify that only four states produce a significant amount of citrus fruits. Ask the following questions:

- Which states produce citrus fruits?
    - California, Florida, Texas, and Arizona.
- What do the four citrus producing states have in common?
    - They have a tropical or subtropical climate and warm temperatures year-round.
- Why aren't citrus fruits grown in other areas of the United States?
    - Citrus trees are sensitive to frost. Cold temperatures can result in loss of a fruit crop and even kill the tree.
- Why aren't greenhouses and other technologies utilized to grow citrus fruits in other states?
    - While greenhouses can provide an ideal climate for plant growth, they are very expensive to build and maintain. The cost to produce citrus fruits in a greenhouse would be much greater than simply growing them in the ideal environment and climate and then shipping the fruit to the consumer.

Resource Availability:

Hog Production is an example of an agricultural commodity being produced in the same area as one of its necessary resources. Pigs are raised for their meat, known as pork. Their primary diet is corn. Display the Hog and Corn Production Maps. Ask your students the following questions:

- What are the top five hog producing states?
    - Iowa, North Carolina, Minnesota, Illinois, and Indiana.
- What are the top five corn producing states?
    - Iowa, Illinois, Nebraska, Minnesota, and Indiana.
- Is there a correlation between hog production and corn production? Why?
    - Yes. Corn is the primary diet for pigs. It is economical to raise pigs close to where their feed is grown. This decreases production costs for the farmer. Most large scale pig farms utilize climate controlled facilities to keep their pigs cool in the summer and warm in the winter. Consequently, pig farms are not restricted to being located in a specific climate.

Available Space

Space is necessary for farmers to raise animals and grow crops. As a class, compare the Farmer-operator and Geographic Area Maps. Notice that California and Texas are among the largest sized states and have some of the highest numbers of farmers. Display and study the Beef Cow and Geographic Area Maps and the Beef Cow and Acres of Pastureland Maps. Ask your students the following questions:

- Can you see any correlations between the geographic area of a state and their beef cattle production?
    - Yes. Beef cattle require more living space than other livestock species. Most beef cattle spend the majority of their lives grazing pastures and rangelands. Larger states have more likelihood of having fields, pastures, and rangelands for cattle to graze.
- Notice that Nevada, Arizona, Utah, and New Mexico rank among the largest states, but they are not high producers of beef cattle. Can you guess what one limiting factor might be?
    - Moisture. If your students need a clue to answer this question, show them the Rainfall and Beef Cow Maps. These four states are located in a desert region and have some of the driest overall conditions. Lack of rainfall decreases the amount of grazing available for cattle feed, thus decreasing the total number of cattle that can be raised per acre.

At this point your students should have an understanding that our food is typically produced by farmers in geographic areas that have ideal climates, necessary resources (fertile soil, moisture, feed, etc.), and adequate space. With this knowledge they are prepared to complete, The Geography of Fall Harvest Dinner activity. When printed or distributed electronically, there will be a map and a question sheet for 11 food items, each representing one fall harvest item for the dinner.

Divide your class into 11 teams of two or three students. Assign each team one food item by giving them one of the 11 food cards.

Instruct students to follow the instructions on their handout. Provide internet access and allow class time for students to research the questions and complete the activity. If you have additional time, you may wish to assign students a more in-depth look at their food item. Use either of the following ideas to deepen their understanding of the production of their food:

- Make a presentation to illustrate the steps of food production from the farm to their plate.
- Assign students to find a short and appropriate educational YouTube video to share with the class about the production of their food. Watch the video clips as part of their presentations. Be sure to preview each video prior to their presentation.

After an appropriate amount of preparation time, ask each team of students to present what they have learned to the class.

While students are presenting, project the attached Fall Harvest Dinner Map on the board. Have each group color in and label the state that produces the most of their assigned food.

Conclusion:

After conducting these activities conclude and summarize the following key points:

- Farmers aim to produce food that is economical and nutritious.
- Many farm commodities thrive in specific geographic locations and/or climates. Therefore, farms produce large quantities of food in these areas and ship it throughout the nation.
- The ability to transport food from the grower to the consumer allows for a diet with many different foods and offers food at a lower cost.
- Commonly referred to as Thanksgiving dinner, this fall feast will likely represent food grown in many regions of our country and may be reflective of many different cultures.

Sources:

- Pumpkins: Background and Statistics
- Gardner's Corner: Fall Issue 2
- USDA Turkey Data
- Cranberry
- Wheat Production in the United States
- US Egg Data
- Undeniably Dairy
- NASS USDA Data and Statistics
- Feed grains Sector at a Glance
- Commodity Highlights USDA
- Ag MRC Carrots

Suggested Companion Resources:

- Quiz: Can you name a food by looking at where it comes from?
- All About the Pumpkin Video
- Eat Happy Project video series
- Modern Marvels: Harvesting
- Visit an Iowa Turkey Farm
- Ag Census Web Maps
- Dirt-to-Dinner: Food Matters
- Producepedia
- Thanksgiving Maps and Posters
- What's In My Food?
- How to Start and Grow Sweet Potatoes
- How to Grow Sweet Potatoes

Reference:

Author, Andrea Gardner - National Center for Agricultural Literacy

Enriching Activities:

- Meet with your school nutrition team to learn about how sweet Zesty Sweet Potatoes are prepared for students at your school. Learn how to prepare the recipe and taste test it with your class.
- Divide students into groups and assign them to prepare a portion of the fall harvest dinner to enjoy as a class activity.
- As a class, take the quiz: Can You Name a Food Just by Looking at Where it Comes From?
- This quiz was created by the Washington Post and shows a series of maps representing different agricultural commodities. Test your geographical and agricultural knowledge of common places for our food to be grown.
- Watch the History Channel's Modern Marvels Season 10, Episode 41 *Harvesting* or Season 12, Episode 50 *Harvesting 2* to learn about the technology involved in the harvesting of our food.
- Use the information and video clips included in the background information section of the lesson to teach students about the growth and production of these common Thanksgiving dinner foods.
- Have students use a grocery store advertisement to calculate the cost of a fall harvest dinner for eight people.
- View the website with the Fall Harvest Maps and Geography.
- Watch the History Channel's History of the Holidays: History of Thanksgiving video clip.

Activity 2: Reflection Questions

After completeing the activity, please answer the questions below by writing your response.

1. What surprised you the most while preparing your presentation?

2. What do you think is the biggest challenge for your group?

3. What is something you learned that you will share with your family?

Activity 2: Application Questions

After completeing the activity, please answer the questions below by writing your response.

1. Why is it important to look at where our food comes from?

2. What are some foods that you have that are linked to cultural holidays or events in your house?

3. How important is food at your family holiday celebrations?

LESSON TWO:
POTATO OBSTACLE COURSE

Objective:

Students will:
- Conduct scientific investigations
- Investigate basic plant needs to complete life processes

Related Competencies:

Foundations Agriculture, Food, and Natural Resources (AFNR), 8006:

- Explain the functions of major plant parts.
- Describe the relationship among temperature, light, air, soil/substrate, water, and nutrients required for plant growth.

Horticulture Sciences, 8034:

- Describe how environmental factors affect plant growth.
- Describe plant propagation methods.
- Identify vegetable crops.
- Analyze plant anatomy and physiology.

Background Knowledge:

The part of the potato plant we eat is called the tuber, which is an underground stem. Each plant produces multiple tubers. Most potato tubers are white or red; however, newer varieties include blue, purple, and speckled. Potatoes have buds or small node-like indentations called eyes. When placed in a warm location, sprouts will develop. The sprouts seek light and are the beginnings of a new plant.

Potatoes are grown predominantly in the tidewater region of Virginia. Varieties of white and red skinned potatoes are popular including Kennebec and Cherry Red. The crop begins with seed potatoes being cut into sections with at least one eye in each section. Small potatoes the size of an egg or smaller may be left whole. The stem emerges from the eye. Ideal planting times for potatoes in the Commonwealth are from mid-March to early April. Virginia potatoes are sold fresh, bagged, or chipped.

Phototropism is the growth of a plant toward a light source. Plants are uniquely equipped to bend toward the direction of the light. A hormone in the plant stem causes it to seek out light, which is generally upwards. Plant stems seek out light in order to start the process of photosynthesis.

Materials:

- Shoebox with lid
- 1 seed potato
- Several pieces of small scrap cardboard
- Roll of tape
- 1 knife, box cutter, or pair of scissors

Extension:

- Have students follow the scientific method creating a hypothesis, lab write up, observation charts, written summary, and conclusion.
- Change one variable in the experiment such as potato variety, box size, or light amount.

References:

- Plant ID Pal
- Phototropism
- Virginia Sweet Potato
- Garden City Harvest

Companion Resources:

- How the Potato Changed the World
- Pommes Maxim Recipe
- America's Heartland Episode: Potatoes

Virginia Grown Potatoes: Obstacle Course

Your teacher has supplied you with Virginia Potatoes. In this activity, you will learn and observe how potatoes grow, and what environment they need that is sutible for growth. Follow the steps below and observe!

Procedure:

1. Cut a ½-inch hole in one end of a shoebox.
2. Create an obstacle course by cutting pieces of cardboard to create a maze within the box for the tuber to move through.
3. Put a sprouting potato on the end of the box opposite the hole.
4. Securely attach the box lid eliminating light from any source other than the hole.
5. Place the shoebox in an area of the room with natural light.
6. Keep a record of observations outside of the box in the table. How many days until you see a sprout growing out of the hole in the box?
7. Discuss findings with your class.

HYPOTHESIS

Materials:

- ❑ Shoebox with lid
- ❑ 1 seed potato
- ❑ Several pieces of small scrap cardboard
- ❑ Roll of tape
- ❑ 1 knife, box cutter, or pair of scissors

DAY	OBSERVATION

Lesson 2: Reflection Questions

After completeing the activity, please answer the questions below by writing your response.

1. What did you observe?

2. Did you observe different changes on different days?

3. If it did not grow, why do you think that is?

Lesson 2: Application Questions

After completeing the activity, please answer the questions below by writing your response.

1. Why is the environment important when we are growing plants?

2. What do we need to think about when planting root vegetables?

3. What can we do to make sure we succeed with root vegetables?

APPENDIX A: SHOPPING LIST

SHOPPING LIST

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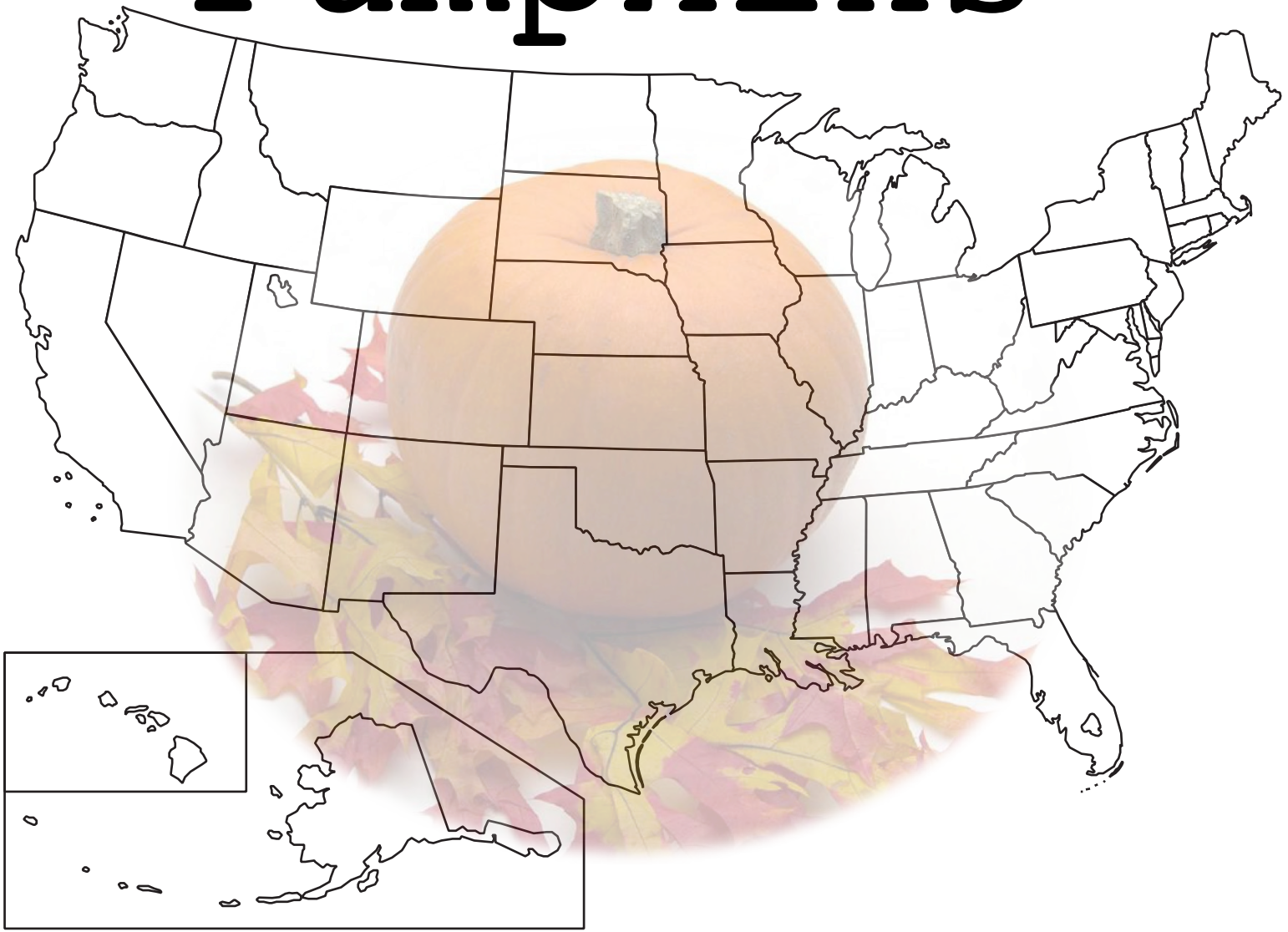
APPENDIX B:
THE GEOGRAPHY OF FALL HARVEST DINNER ACTIVITY

Print the next pages for a full activity packet.

Pumpkins



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
PUMPKINS

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions do pumpkins require?

2. How long does it take from the time a pumpkin seed is planted until it is harvested?

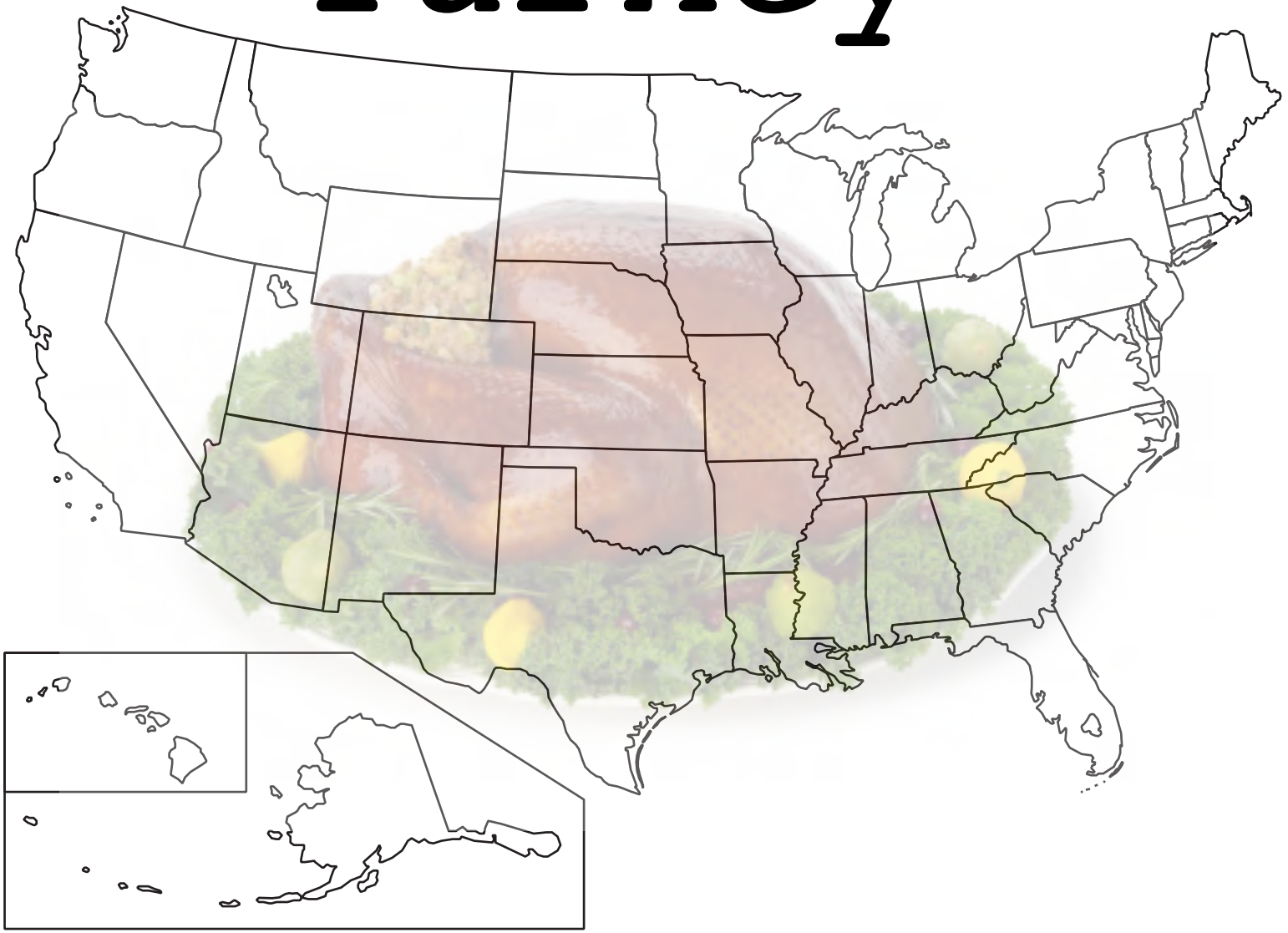
3. What part of the plant is a pumpkin?

4. How are pumpkins harvested?

5. How are pumpkins processed to prepare them for shipping and purchasing by a consumer?

6. How can pumpkins be prepared for Thanksgiving Dinner?

Turkey



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
TURKEYS

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate can turkeys be raised in?

2. How long does it take from the time a turkey is hatched until it is harvested?

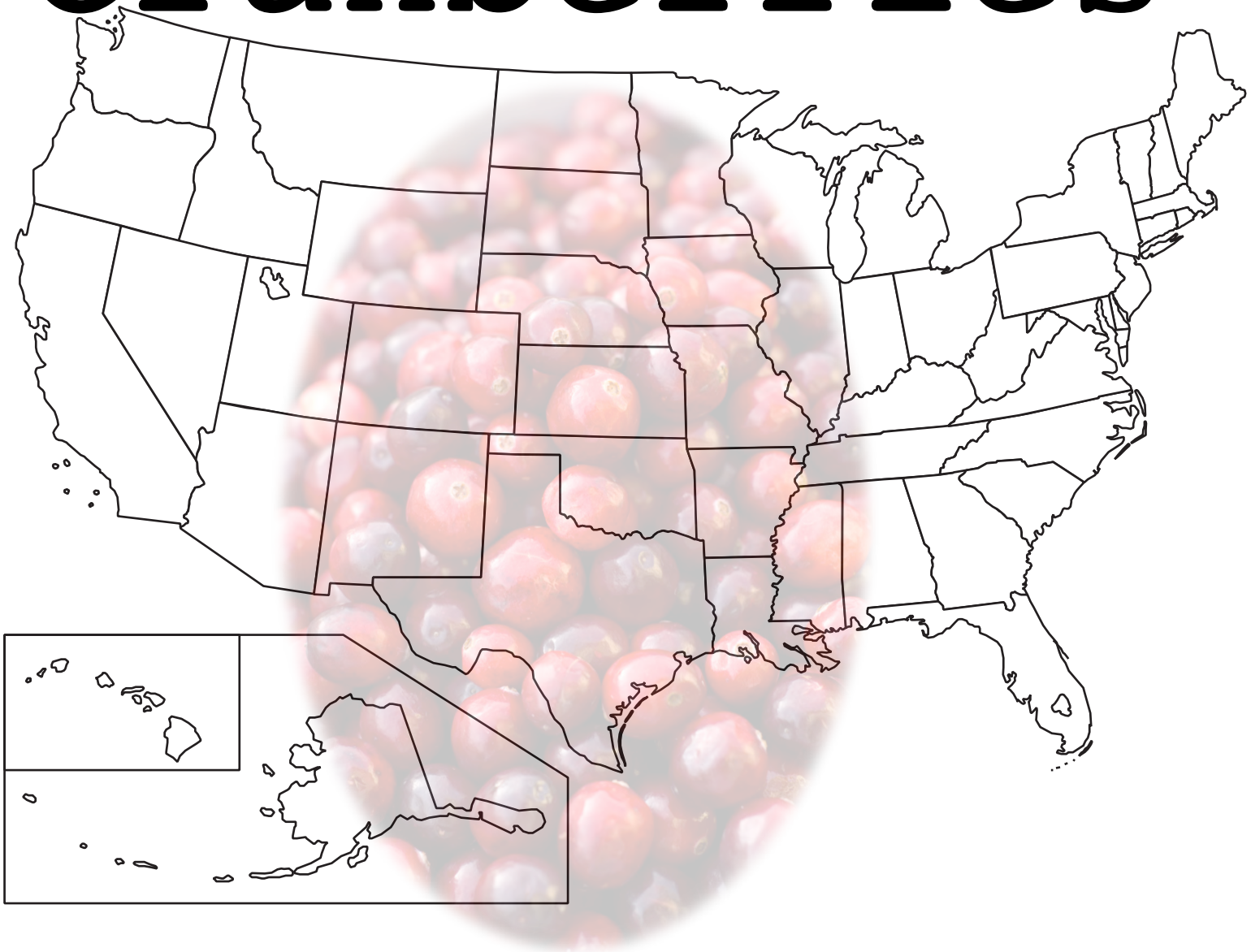
3. What are the names for a male turkey and female turkey?

4. What do turkeys eat?

5. What is the term used to describe a group of turkeys?

6. How can turkey be prepared for Thanksgiving Dinner?

Cranberries



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
CRANBERRIES

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions do cranberries require?

2. Describe what happens in each season on a cranberry farm.

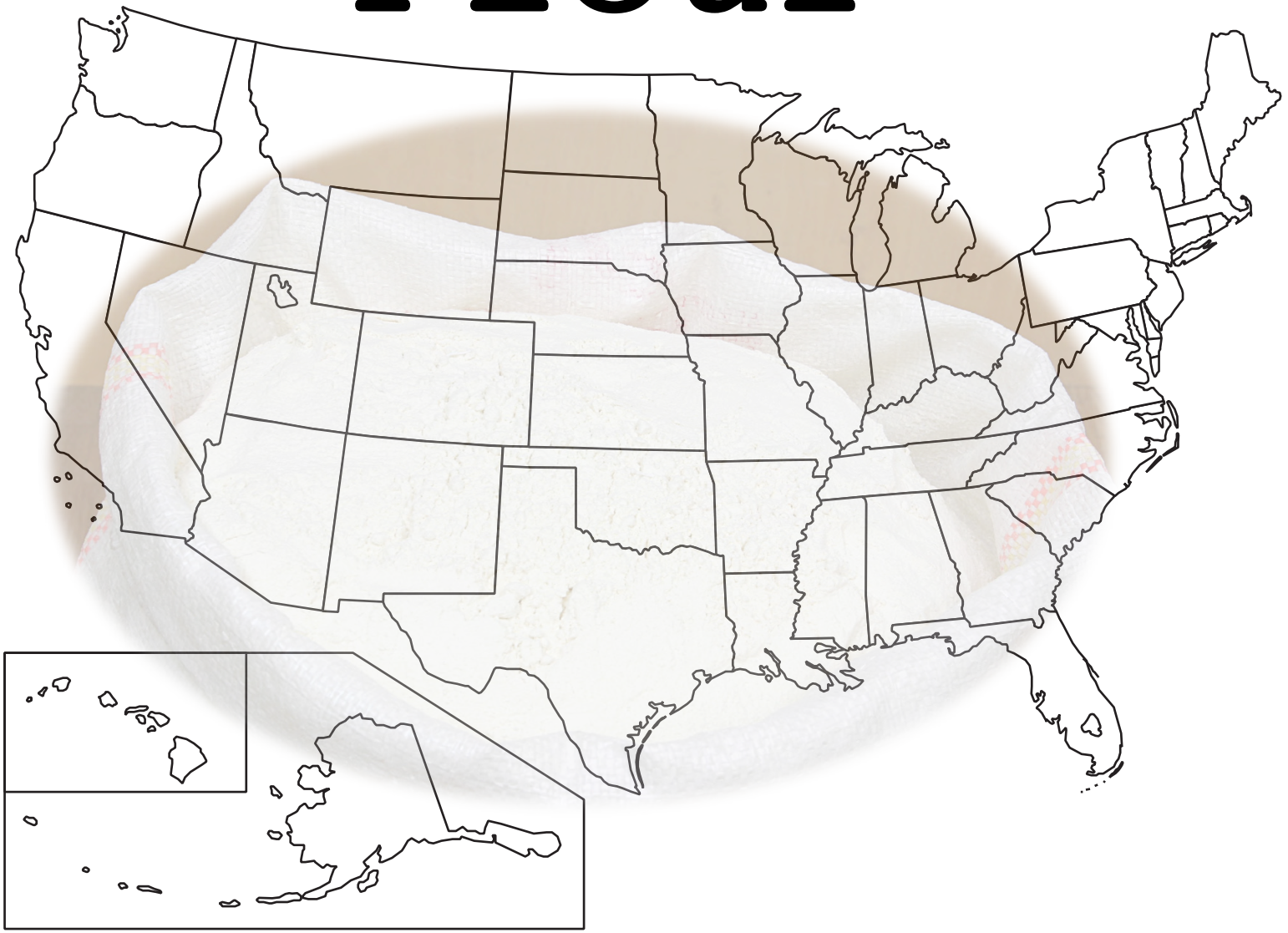
3. What type of plant do cranberries grow on?

4. How are cranberries harvested?

5. How are cranberries processed to prepare them for shipping and purchasing by a consumer?

6. What Thanksgiving dishes use cranberries?

Flour



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
FLOUR

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions does wheat require?

2. How long does it take from the time wheat is planted until it is harvested?

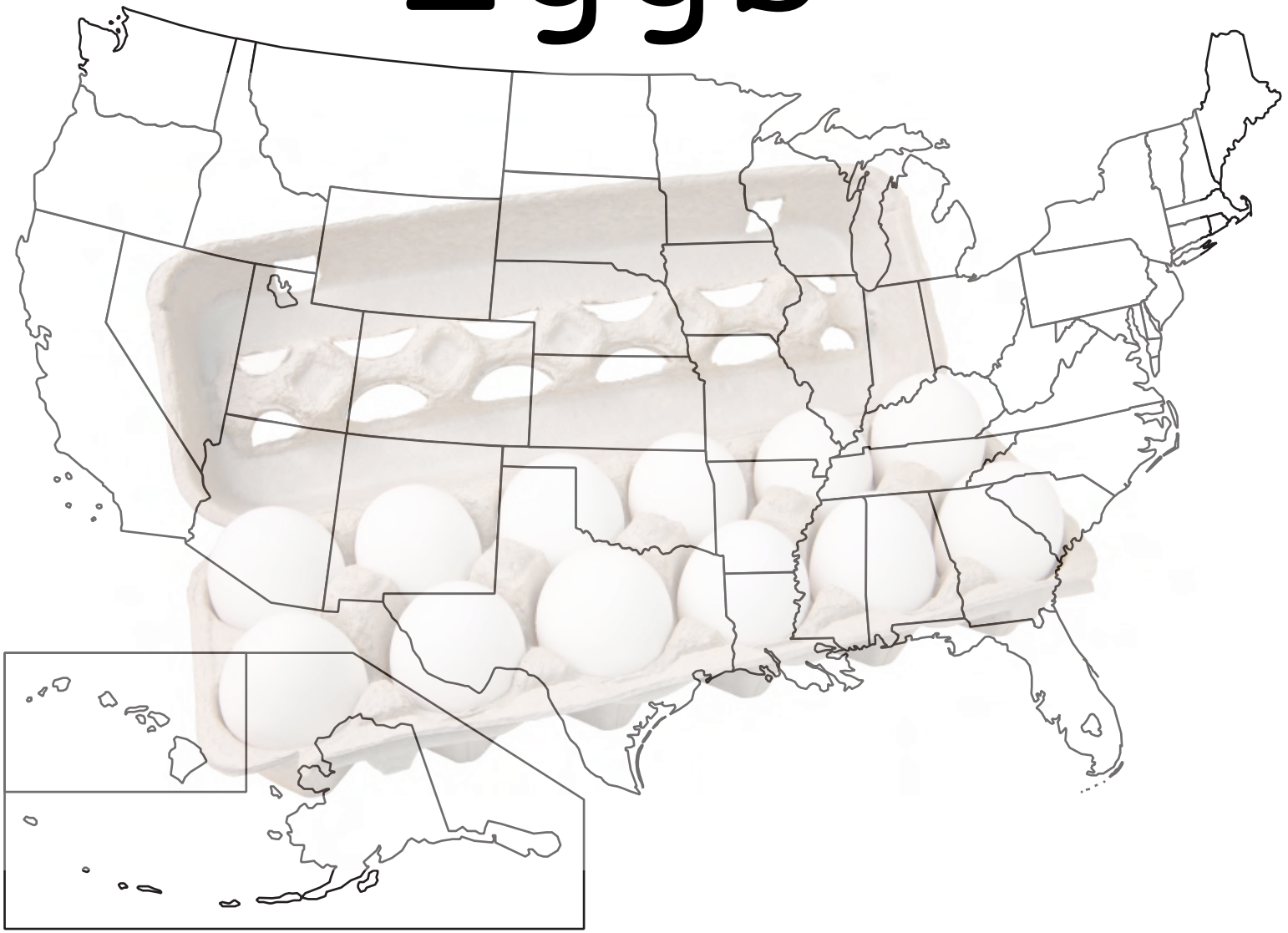
3. Which part of the wheat plant is ground to make flour?

4. How is wheat harvested?

5. How is wheat processed into flour?

6. What Thanksgiving dishes require flour?

Eggs



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
EGGS

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate can hens be raised in?

2. How long does it take from the time a female chick hatches until she begins laying eggs?

3. How many eggs does a hen lay per day?

4. Is there a nutritional difference between an egg with a brown shell and an egg with a white shell?

5. How are eggs processed to prepare them for shipping and purchasing by a consumer?

6. What Thanksgiving dishes require eggs?

Milk

Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
MILK

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate can dairy cows be raised in?

2. How long does it take from the time a calf is born until a female can produce milk?

3. How much milk does the average cow produce each day?

4. What dairy products is milk used to make?

5. How is cheese made?

6. What Thanksgiving dishes require milk, cheese, butter or other dairy products?

Sugar

Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
SUGAR

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions do sugar beets and sugar cane require? (research separately)

2. How long does it take from the time sugar beets/cane is planted until it is harvested?

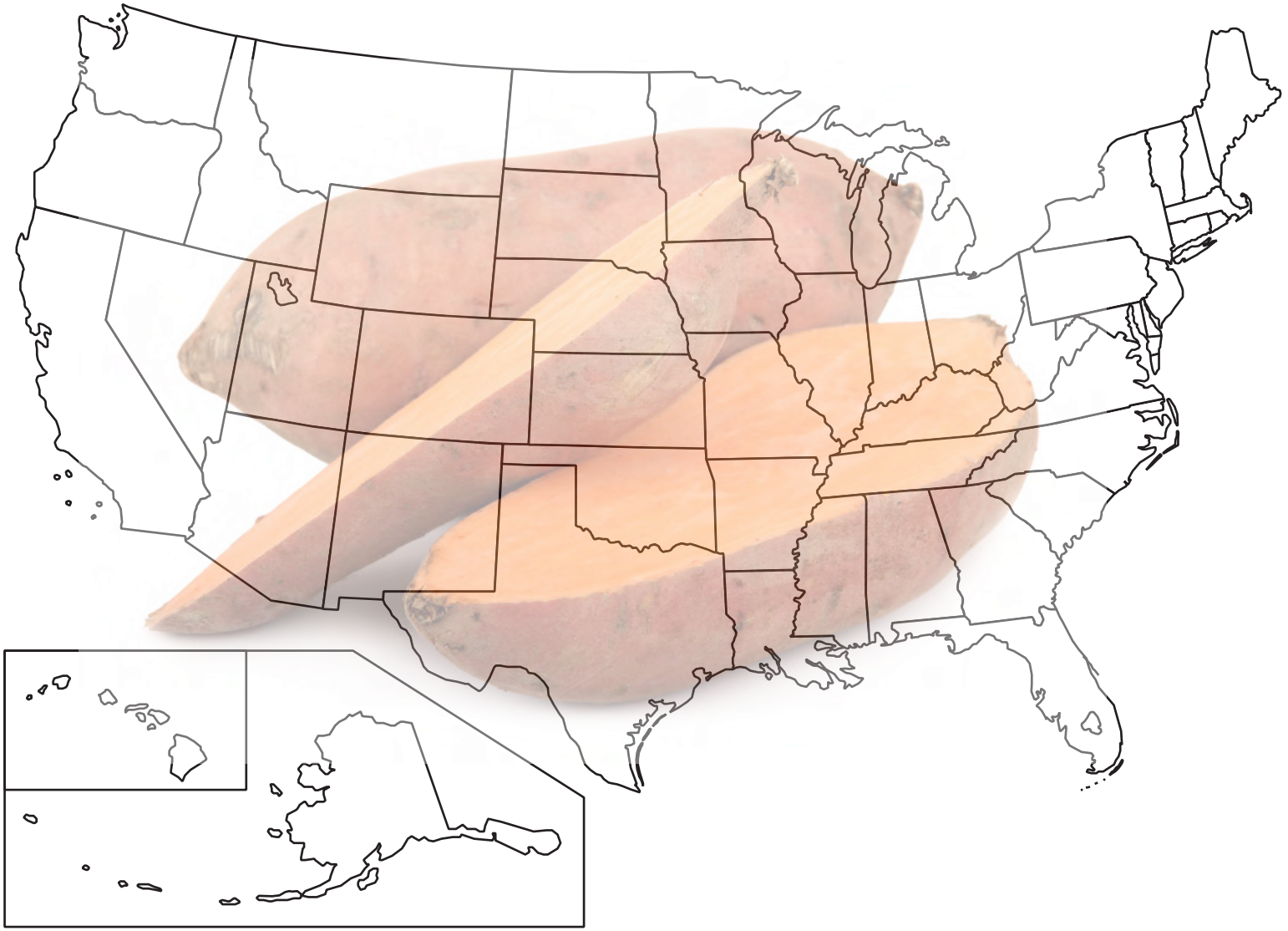
3. Which part of the plant is sugar cane and sugar beet?

4. How are sugar cane/beets harvested?

5. How is sugar processed from sugar cane and sugar beets?

6. What Thanksgiving dishes is sugar used in?

Yams



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
YAMS

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions do yams require?

2. How long does it take from the time yams are planted until they are harvested?

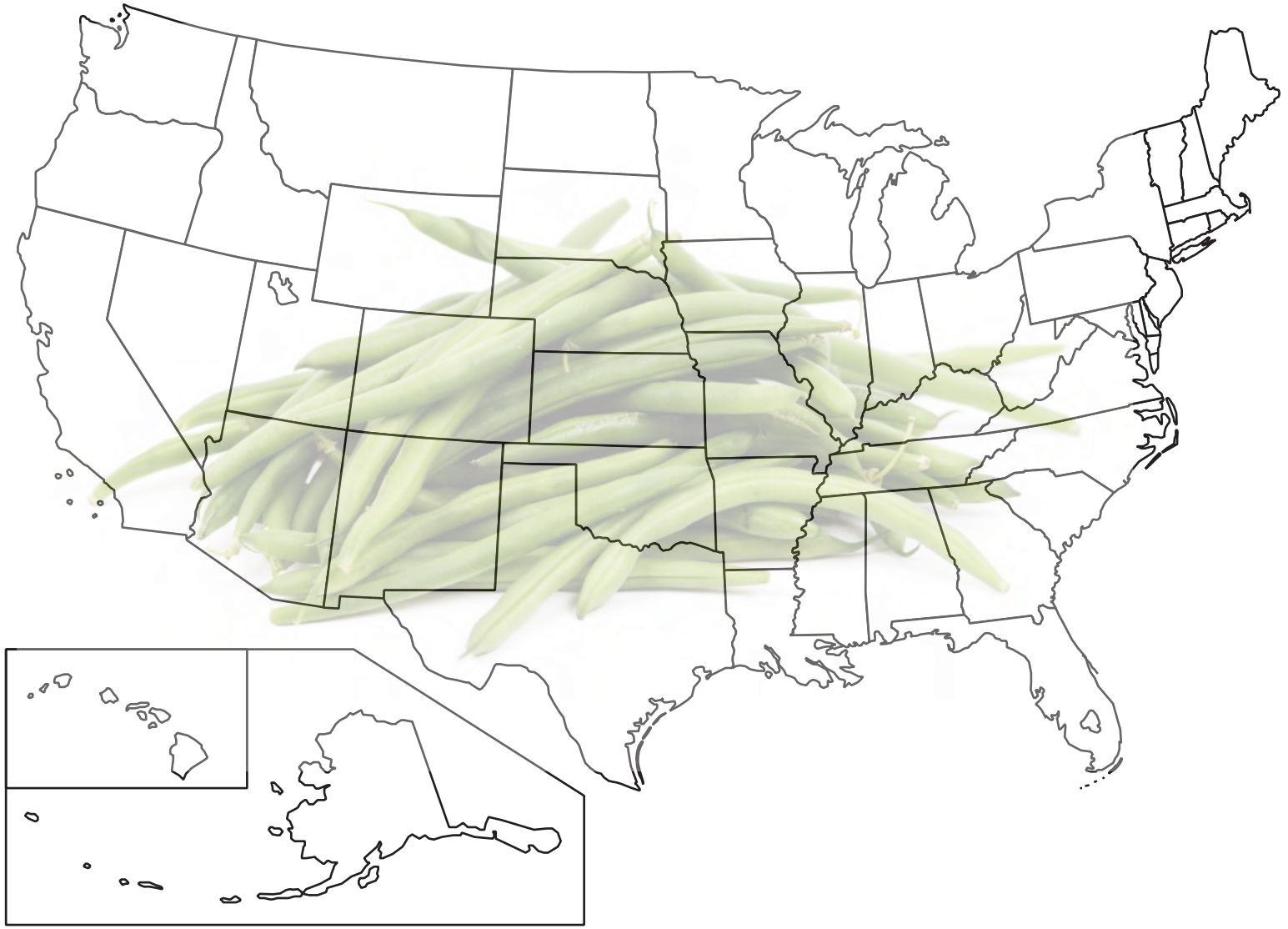
3. Which part of the plant is the yam?

4. How are yams harvested?

5. How are yams processed to prepare them for shipping and purchasing by a consumer?

6. How can yams be prepared for Thanksgiving Dinner?

Beans



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
BEANS

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions do beans require?

2. How long does it take from the time beans are planted until they are harvested?

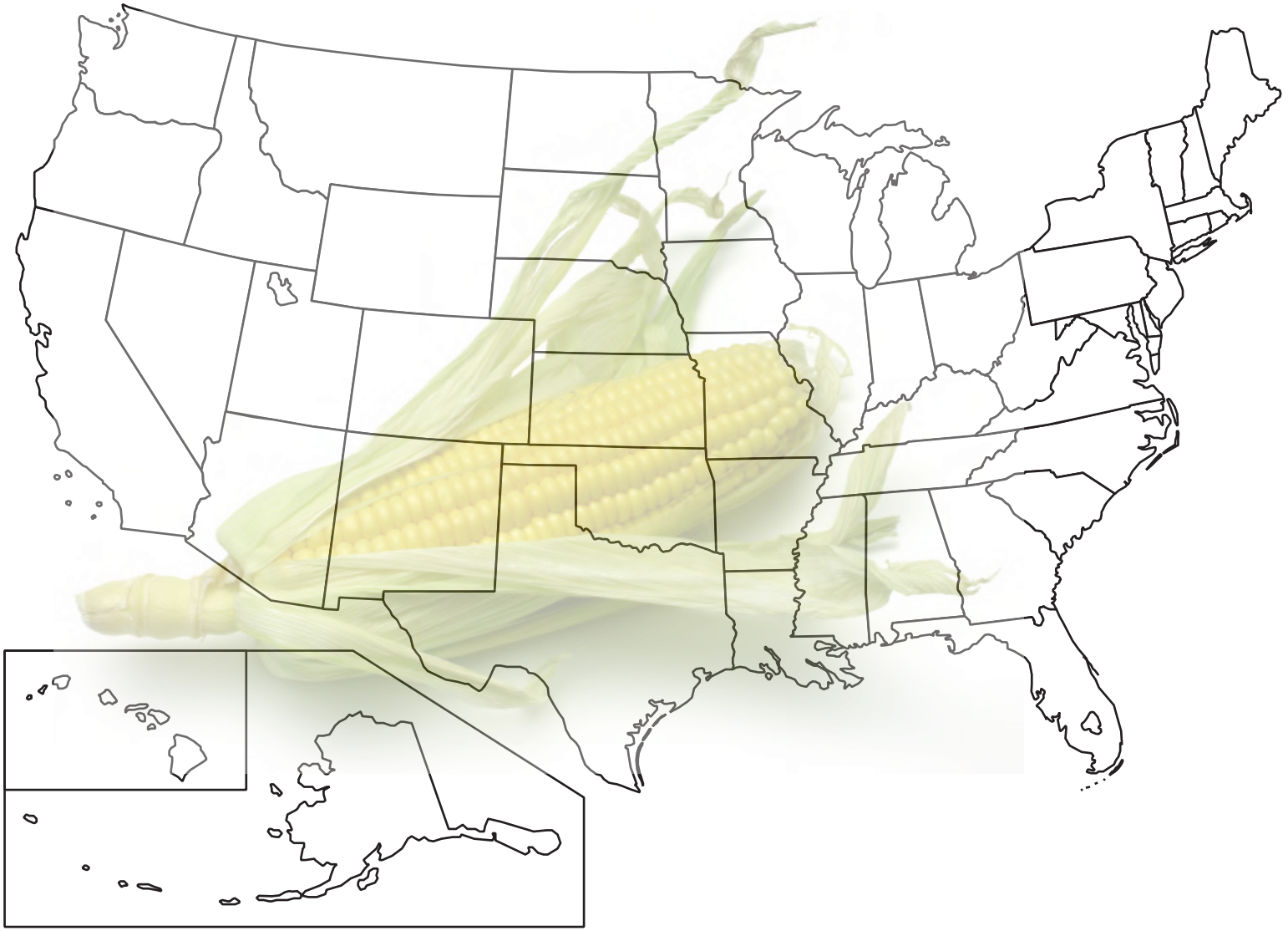
3. Which part of the plant produces the bean?

4. How are beans harvested?

5. How are beans processed to prepare them for shipping and purchasing by a consumer?

6. How can beans be prepared for Thanksgiving Dinner?

Corn



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
CORN

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions does corn require?

2. How long does it take from the time corn is planted until it is harvested?

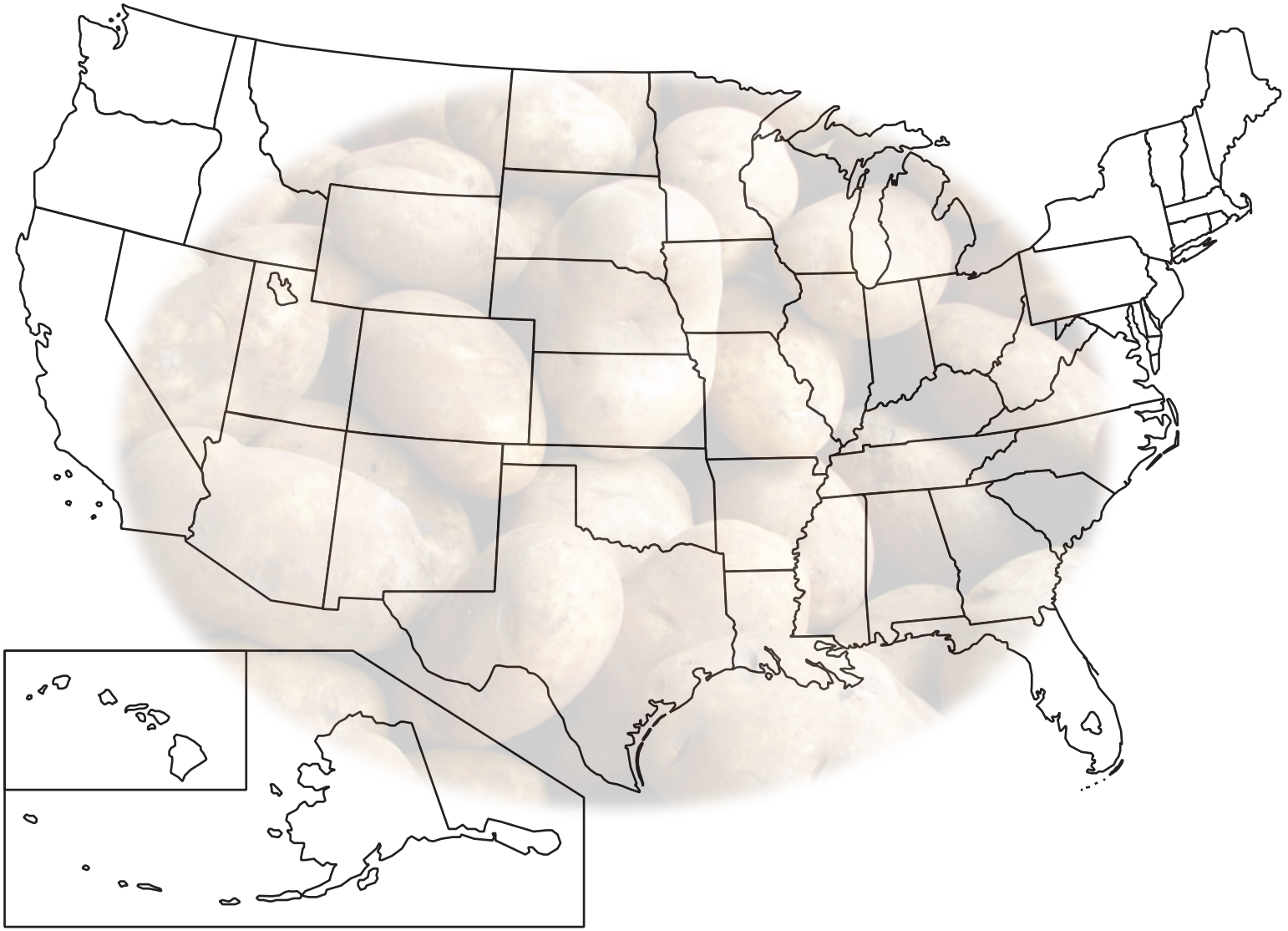
3. Which part of the plant is the corn?

4. How is corn harvested?

5. How is corn processed to prepare it for shipping and purchasing by a consumer?

6. How can corn be prepared for Thanksgiving Dinner?

Potatoes



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
POTATOES

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions do potatoes require?

2. How long does it take from the time potatoes are planted until they are harvested?

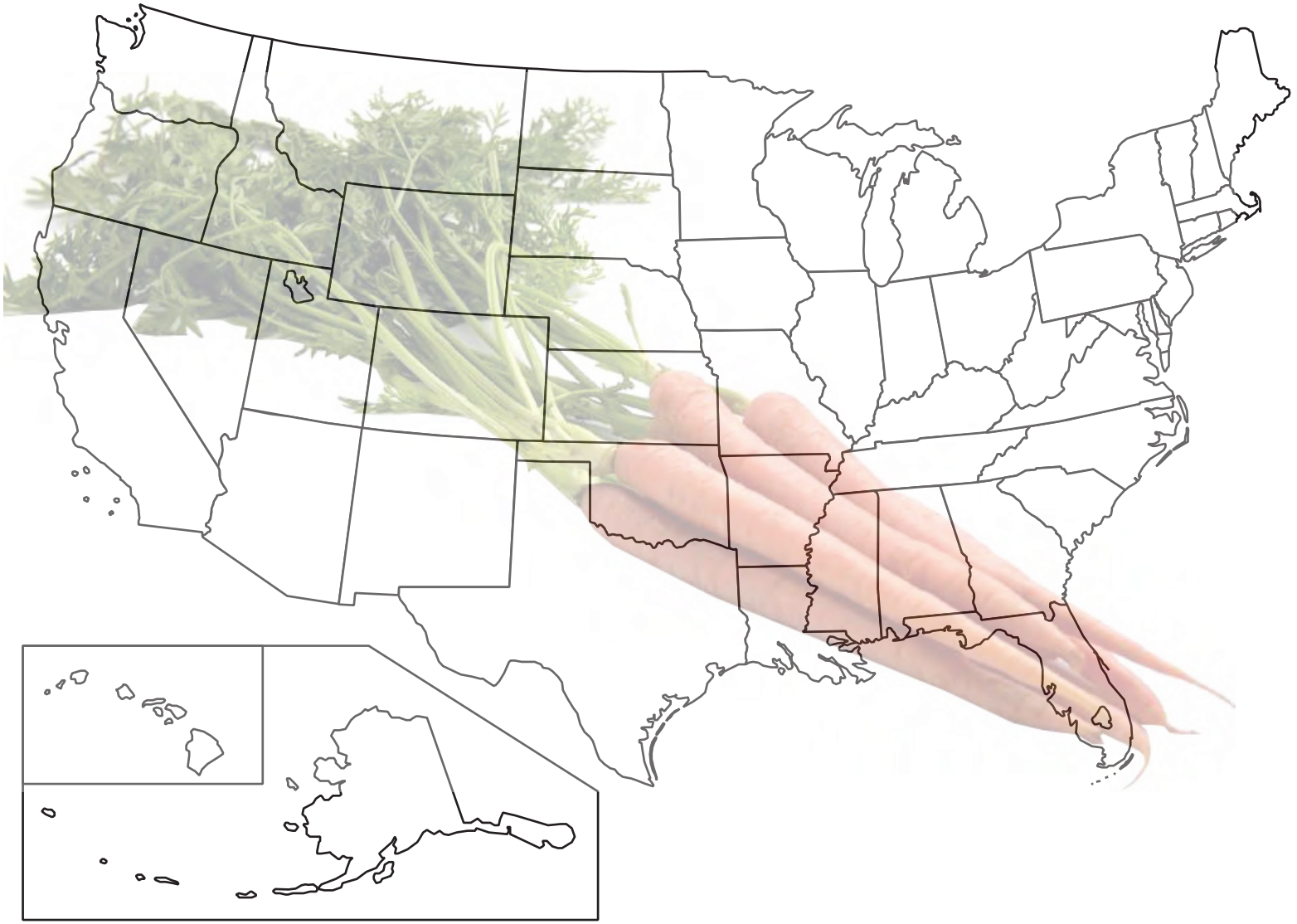
3. Which part of the plant is the potato?

4. How are potatoes harvested?

5. How are potatoes processed to prepare them for shipping and purchasing by a consumer?

6. How can potatoes be prepared for Thanksgiving Dinner?

Carrots



Names_____

THE GEOGRAPHY OF THANKSGIVING DINNER
CARROTS

Step 1: Research the top 5 states that produce pumpkins in the United States. Color the state in red and label it with the rank (1, 2, 3, 4, or 5) on the map found on the other side of this handout.
Step 2: Research the crop and answer the following questions:

1. What climate and growing conditions do carrots require?

2. How long does it take from the time carrots are planted until they are harvested?

3. Which part of the plant is the carrot?

4. How are carrots harvested?

5. How are carrots processed to prepare them for shipping and purchasing by a consumer?

6. How can carrots be prepared for Thanksgiving Dinner?

APPENDIX C:
FALL HARVEST DINNER MAP

Print the next page for activity graphic.

Thanksgiving Dinner Map