

The Amazing Peanut

- Objective:
1. The student will learn the history of peanuts and locations around the state, country, and the world where they are produced.
 2. The student will learn how peanuts grow, the parts of the peanut plant and the parts of the peanut.
 3. Students will plant a peanut garden.

Grade Level: 1-3 4-6

TEKS:

SS- 1.1A, B; 2.4A,B; 3.16A, E; 3.5C M- 5.3B; 5.13C; 6.2C

TAKS:

GRADE

OBJECTIVES

Reading	3, 4, 5, 6	1, 4
Writing	4	1, 2, 3, 4, 5, 6
Science	5	1, 2, 3, 4
Math	3, 4, 5, 6	1, 2, 3, 4

Assessment Summary:

- Materials: Mapping Activities
 World, U.S. and Texas maps (wall maps if available: Student maps are included in lesson)
 Transparencies made from activity sheets
 Raw peanuts in shell
 Procedure for "Planting a Peanut Garden"
- Equipment: Magnifying glass
 Use bio-degradable student made pots from lesson "Making Your Own Planting Pots"
 Sandy or Sandy Loam soil (a good potting soil will work)
 12" or larger pots, buckets or aquarium

- Assessment: Students will be able to label the parts of the peanut plant
 Students will be able to label the major parts of the peanut
 Students will plant an indoor peanut garden
 Descriptive paper on how peanuts grow
 Other grade appropriate activities included
 Peanut Math and Graphing activities

Background Information

The History of the Peanut

The peanut plant probably originated in Brazil or Peru, although no fossil records exist to prove this. Peanuts were grown as far north as Mexico by the time the Spanish began their exploration of the New World. The explorers took peanuts back to Spain, where they are still grown today. From Spain, traders and explorers took peanuts to Africa and Asia. Africans were the first people to introduce peanuts to North America. Eventually, peanuts were planted throughout the Southern United States. Today, peanuts are one of America's favorite foods.

Where in the U.S. Do Peanuts Grow?

In the United States today nine states grow most of the peanut crop. Georgia grows nearly half of all the peanuts grown in the United States, followed by Texas, Alabama, North Carolina, Oklahoma, Virginia, Florida, South Carolina and New Mexico. The peanut producing states are grouped into three regions. The first region is the Alabama-Georgia-Florida or Southeast Region. The second is the Texas- Oklahoma-New Mexico or the Southwest Region. And the third is the North Carolina-South Carolina-Virginia or the Virginia-Carolina Region. About 60% of all the peanuts grown in the United States are grown in the Southeast Region, about 20% are grown in the Southwest Region and the remaining 18% are grown in the Virginia-Carolina Region.



Where in Texas Do Peanuts Grow?

Texas ranks 2nd in peanut production in the United States, behind Georgia. Most of the peanuts grown in Texas are raised in West Texas in the counties of Gaines, Terry, Dawson and Yoakum. Peanuts are also grown in Central and South Texas.

The History of Peanut Butter

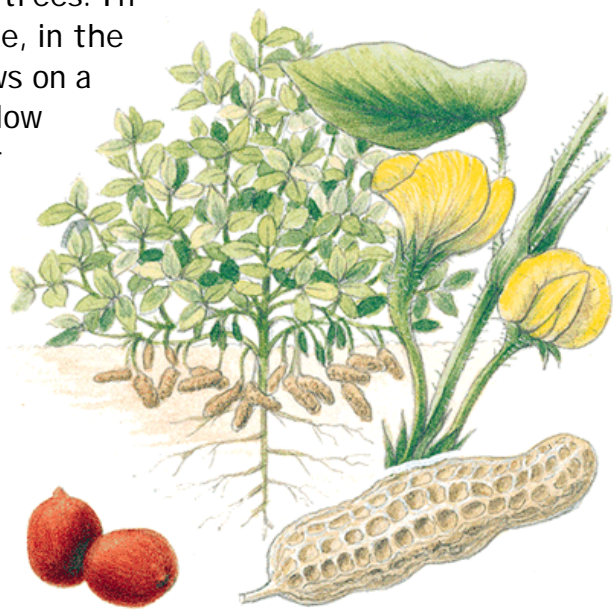
There is evidence that ancient South American Inca Indians were the first to grind peanuts to make peanut butter and that Dr. John Harvey Kellogg (of cereal fame) invented a version of peanut butter in 1885. A St. Louis physician may have developed a version of peanut butter as a protein substitute for his older patients who had poor teeth and could not chew meat. Peanut butter was first introduced at the Universal Exposition (World's Fair of 1904) in St. Louis, Missouri.

The No-Nut Peanut

Many are surprised to discover that the peanut is actually not a nut at all. In fact, it is a legume and belongs in the pea family. The peanut probably has been given more names throughout history than any other food. Some nutty names given to the peanut include: goober, groundnut, monkey nut, earthnut and ground pea, just to name a few. Today in Spain, the peanut is called Mani, pronounced *my-knee*. In Greece, the peanut is called Fystiki, pronounced *fee-stee-kee*. In France, the peanut is called Cacahuete, pronounced *ka-ka-wet*. In Germany, the peanut is called Erdnuss, pronounced *aird-noose*. And in Russia, the peanut is called Zemlyanoy Grek, pronounced *zem-ya-noy arek*.

How the Peanut Plant Grows

Unlike other nuts, peanuts do not grow on trees. In fact, the peanut is not a nut at all! It is a legume, in the pea family. The peanut is unusual because it grows on a plant which flowers above the soil but fruits below it. A farmer usually plants his peanuts in April or May. Once planted, peanut seeds grow into a green, oval shaped plant which reaches about 18 inches in height when fully mature. Small yellow flowers appear on the lower part of the plant as it begins to grow. These flowers pollinate themselves and then lose their petals as the fertilized ovary begins to enlarge. The enlarged ovary, called the peg, grows down and away from the plant forming a small stem which extends to the soil. The peanut embryo is the tip of the peg, which penetrates the soil. The embryo begins to develop once underground, growing into a peanut. From planting to harvesting, the growth cycle of a peanut takes four to five months.



The Father of the Peanut

George Washington Carver began his research into peanuts in 1903 at Tuskegee Institute in Alabama. The talented botanist recognized the value of peanuts as a cash crop and proposed that peanuts be planted as a rotation crop in farmers' fields. This procedure was especially valuable in the southeastern cotton growing areas when boll weevils threatened the cotton crops. Farmers across the region listened to the great scientist and peanut production flourished. Additional research into the peanut helped Carver to discover over 300 uses for the peanut, including shaving cream, leather dye, coffee, ink, shoe polish and more. For his work in promoting the peanut and its cultivation, George Washington Carver is today respectfully known as the father of the peanut industry.

- American Peanut Council "Introducing... the No-Nut Peanut- A Teacher's Kit for Grades 3-5"

- [Agriculture: Producing Our Food & Fiber Resource Guide for Third Grade.](#)

The Amazing Peanut

Lesson Plan

1. Introduce new vocabulary:

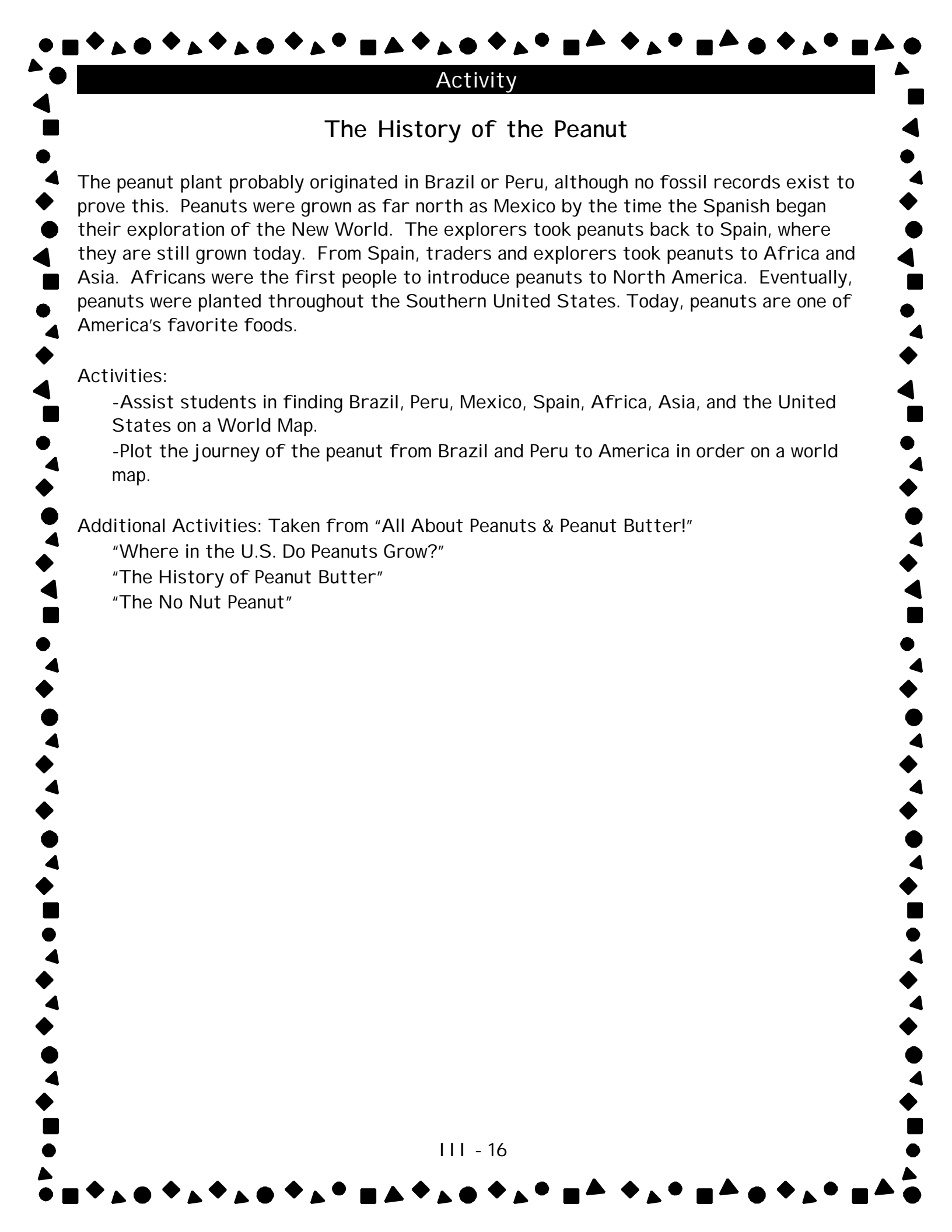
Grades 1-3

leaf
flower
root
peg
stem
legume

Grades 5-6

embryo
ovary
pod
testa
cotyledons
germ

2. Discuss Dr. George Washington Carver - "The Father of Peanut Butter", "The Origins of the Peanut", "Where Peanuts Grow".
3. Show transparency of the World with the countries marked and that grow peanuts.
4. In groups of two, have students use maps and/or globes to identify the countries. Assign one country to each group. Label on the overhead.
5. Use the U.S. Map started in the Soybean unit to identify the states that produce peanuts. Have students use colored push pins to identify those states.
6. Read and discuss background information about how the peanut grows. On transparencies point out and label the parts of the peanut plant and what function each performs.
7. Have students label their own activity sheets "The Peanut Plant".
8. Have students write down the procedure for making a peanut butter and jelly sandwich. Then have students attempt to follow their procedure exactly as they wrote it by actually making peanut butter and jelly sandwiches. After completing the activity have them rewrite the procedure and compare the first writing with the second.
9. Divide students into pairs and have them examine raw peanuts in the shell. Have them find the parts of the peanut shown on the activity sheet key.
10. Using the procedure in the lesson "Making Your Own Planting Pots", have students make bio-degradable pots to plant their peanuts in. Plant peanut garden and have students monitor growth of plants. When ready to transplant to larger pot, plant the students' pots as is. They will decompose in the soil over time.



Activity

The History of the Peanut

The peanut plant probably originated in Brazil or Peru, although no fossil records exist to prove this. Peanuts were grown as far north as Mexico by the time the Spanish began their exploration of the New World. The explorers took peanuts back to Spain, where they are still grown today. From Spain, traders and explorers took peanuts to Africa and Asia. Africans were the first people to introduce peanuts to North America. Eventually, peanuts were planted throughout the Southern United States. Today, peanuts are one of America's favorite foods.

Activities:

- Assist students in finding Brazil, Peru, Mexico, Spain, Africa, Asia, and the United States on a World Map.
- Plot the journey of the peanut from Brazil and Peru to America in order on a world map.

Additional Activities: Taken from "All About Peanuts & Peanut Butter!"

- "Where in the U.S. Do Peanuts Grow?"
- "The History of Peanut Butter"
- "The No Nut Peanut"

Peanut Farming

Name _____

Read the story below then label each picture with the bold words.

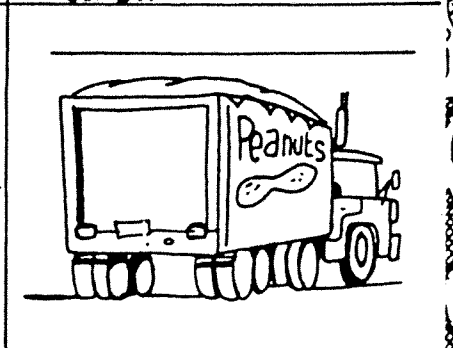
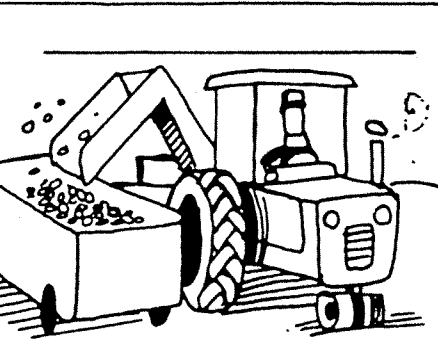
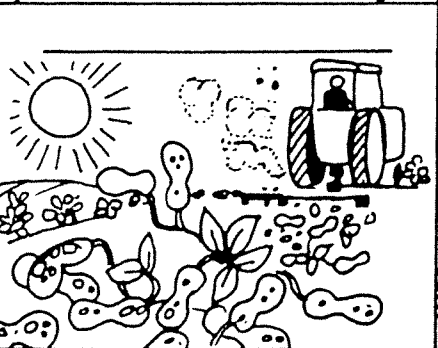
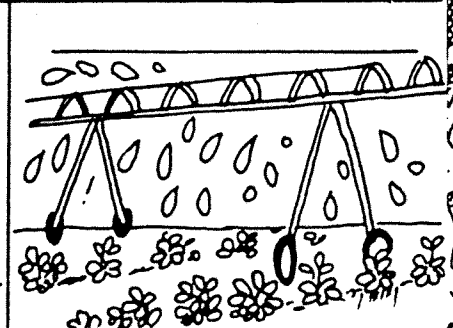
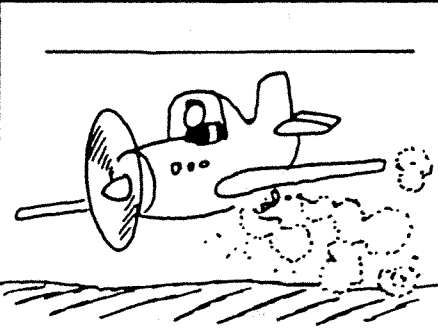
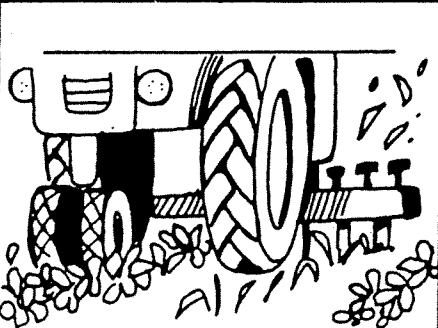
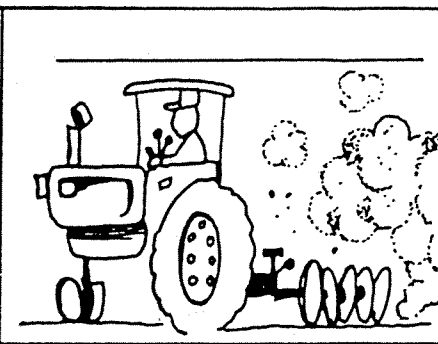
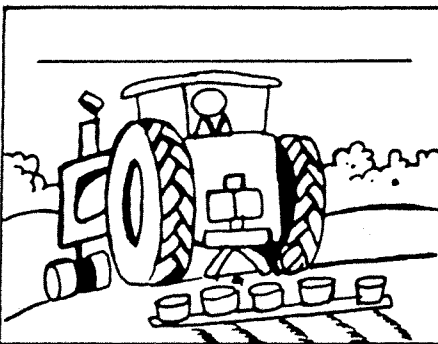


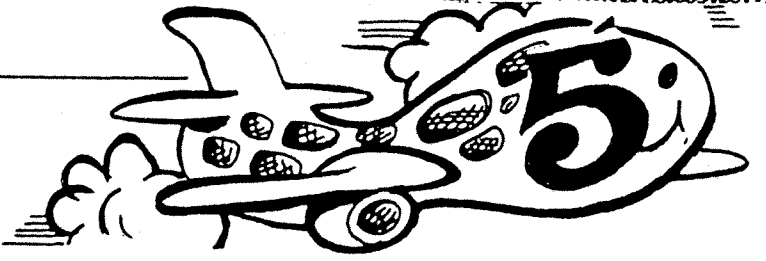
Peanut farmers begin to prepare their fields for planting in March. First, they **fertilize** the fields to help the peanuts grow. Then they **plow** the fields to prepare the soil for planting. Peanut seeds are **planted** in early May. The peanut itself is actually the seed.

Peanut farmers **cultivate** the fields throughout the growing season to get rid of weeds and other plants that have grown in the peanut fields. Farmers must also **spray the fields** to eliminate bugs and diseases and **irrigate**, or water, the peanut crops. Irrigation is especially important during times of drought.

Harvesting begins in September. The peanut plants are pulled from the ground and the peanuts are turned up to dry in the sun for several days. A combine **separates** the peanuts from the vines and dumps the peanuts into drying trailers. Finally, the farmer **hauls** the peanuts to a buying station or shelling plant to sell them.

None of the peanut plant is wasted. The vines are baled for hay to feed farm animals or are plowed into the fields to fertilize for the next crop. Even the peanut shell can be used for things like fireplace logs.

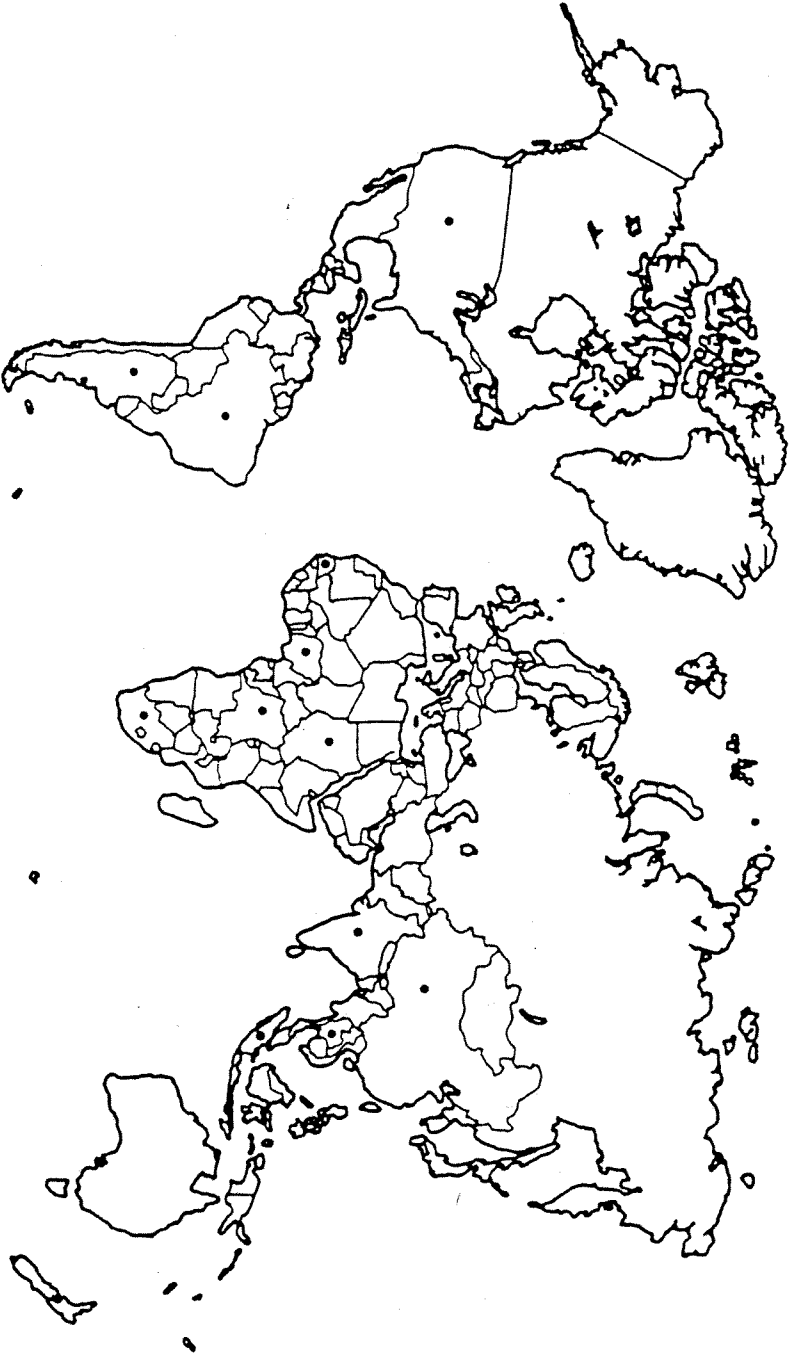




Name _____

A. The countries marked on the map below grow peanuts. Can you name them?
You may use a world map or globe to help you identify them.

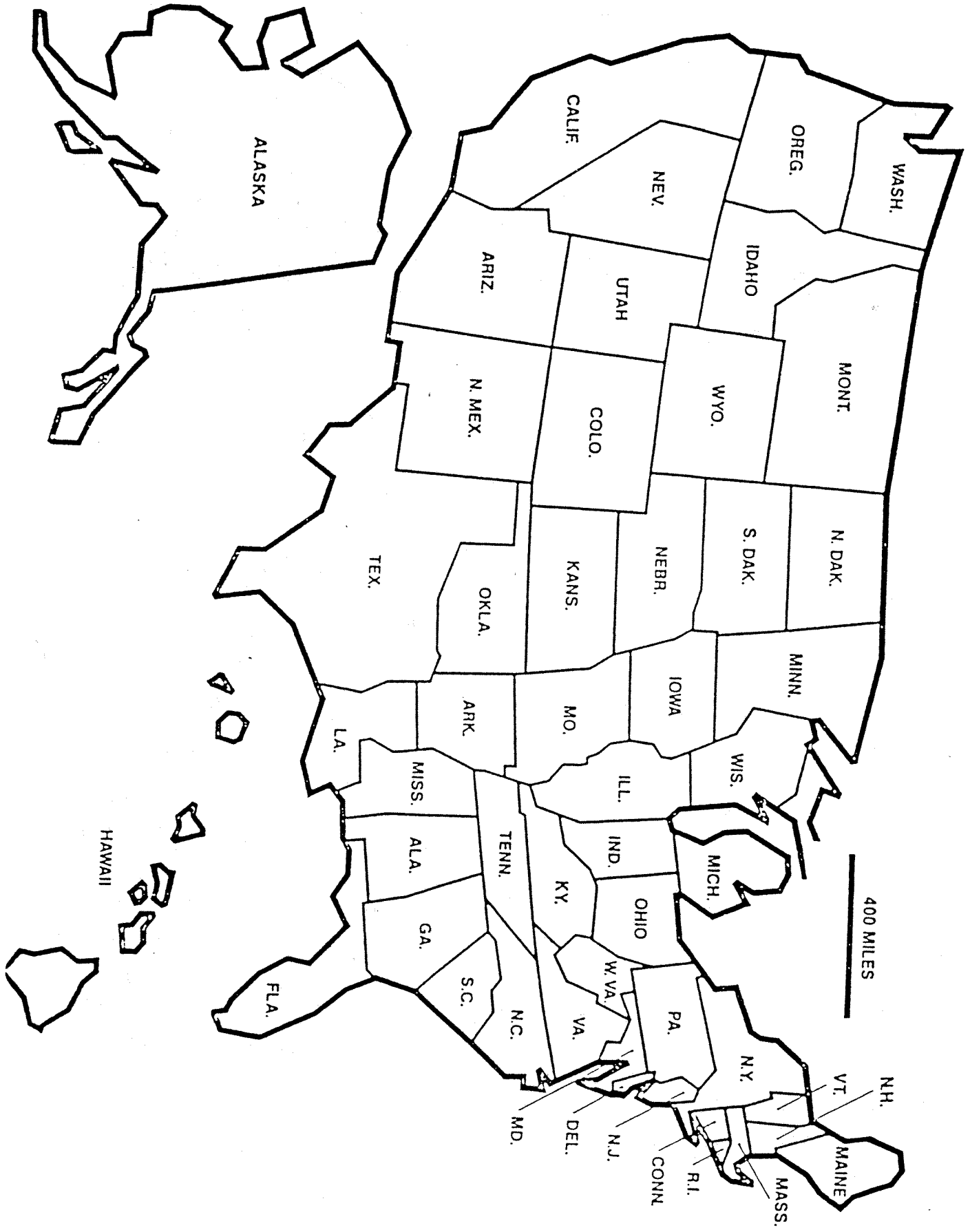
1. Example: United States
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



B. The following countries import peanuts from the United States. Color them in on the map above.

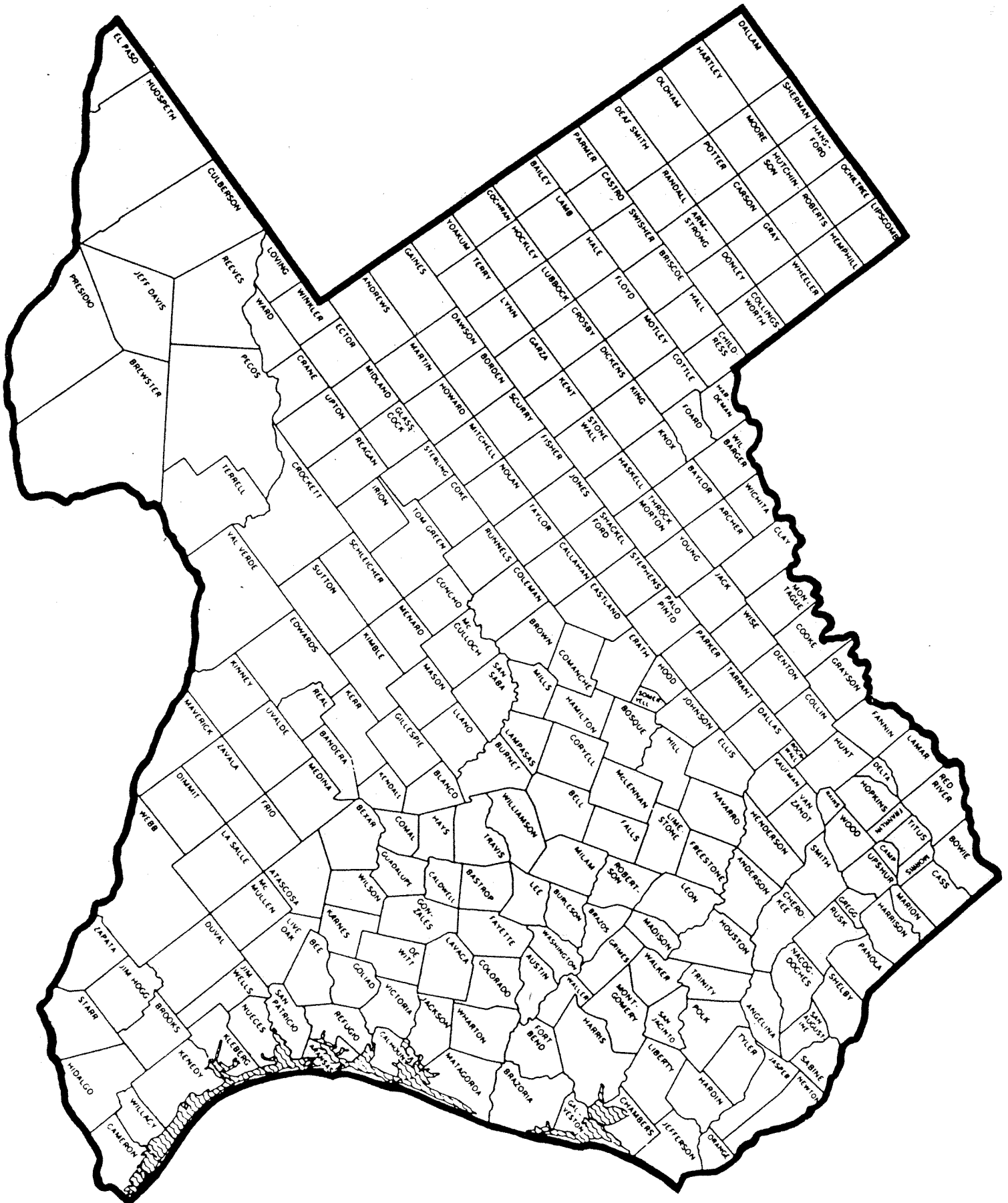
- | | | | | |
|---------|--------|-------------|-------------|--------|
| England | Canada | Netherlands | France | Norway |
| Japan | Spain | Germany | Switzerland | Italy |

Where in the United States Do Peanuts Grow?
Peanuts grow mainly in 9 states. They include Georgia, Texas, Alabama, Florida, New Mexico, North Carolina, Oklahoma, South Carolina and Virginia. On the map color the 9 states that grow peanuts. Use a different color for the state you live in.



Where in Texas Do Peanuts Grow?

The ten counties in Texas that produced the most peanuts in 1998 were *Gaines, Terry, Dawson, Yoakum, Frio, Collingsworth, Atascosa, Haskell, Comanche, and Hall*. On the Texas Map locate and color these counties.



Name _____

The Peanut Plant: Picture Perfect!

Label the parts of the peanut plant.

Leaf

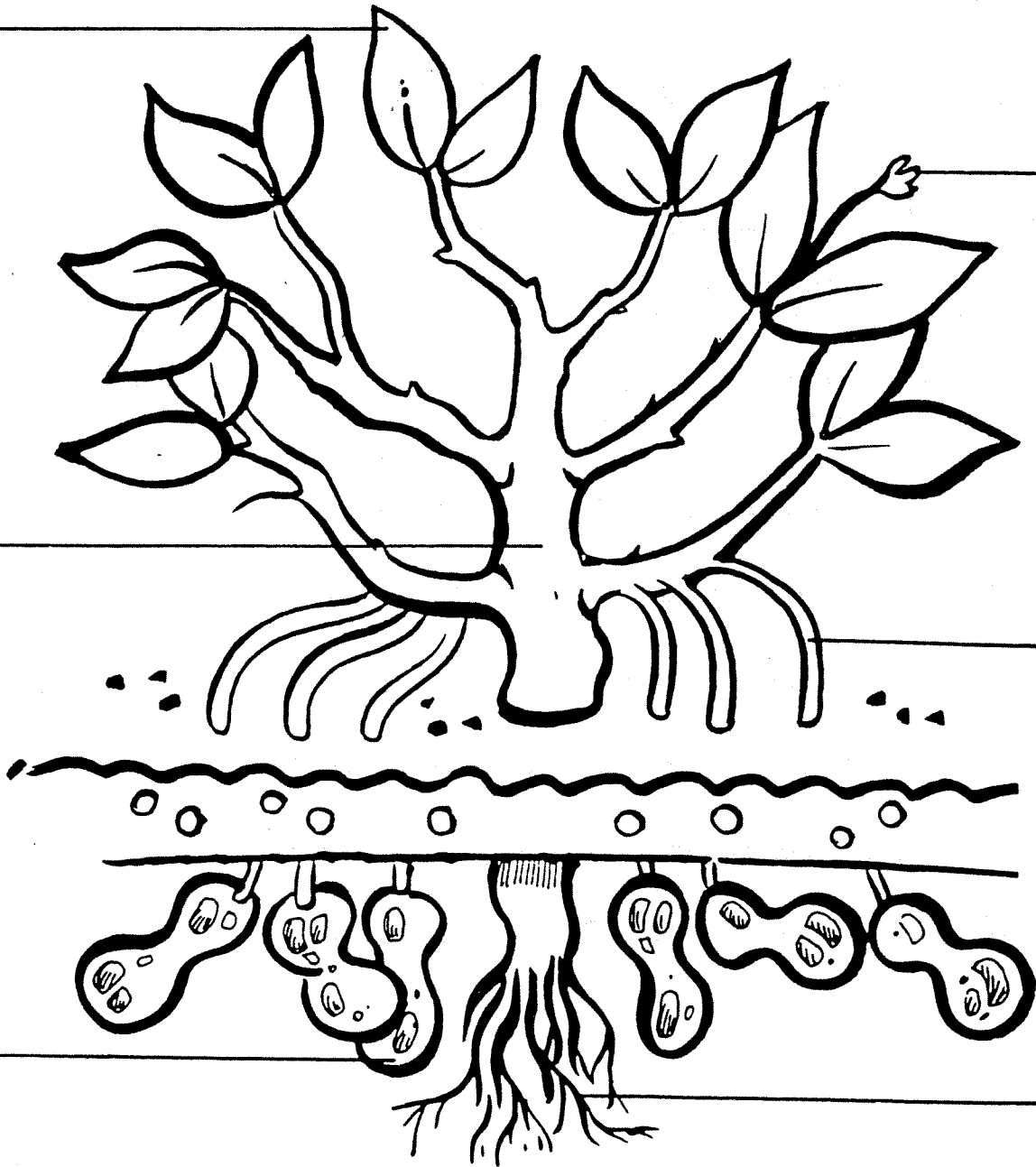
Flower

Root

Peg

Stem

Peanut



Color the picture.

Peanut Math

1. Finish this chart by figuring out how many pounds of peanuts were harvested from each acre. (Hint: Divide the number of pounds harvested by the number of acres harvested.)

Year	Acres Harvested	Pounds	Pounds Per Acre
1950	490 thousand	323 million	
1960	275 thousand	213 million	
1970	306 thousand	429 million	
1980	290 thousand	293 million	
1990	285 thousand	537 million	
1997	312 thousand	811 million	

2. Use the information above to make bar graphs on the next page. Use map colors or crayons to make your bar graphs.
3. In what year were the most acres of peanuts harvested? _____
4. In what year were the fewest acres of peanuts harvested? _____
5. In what year were the most pounds of peanuts harvested? _____
6. In what year were the fewest pounds of peanuts harvested? _____
7. In what year did farmers produce the most pounds per acre? _____
8. In what year did farmers produce the fewest pounds per acre? _____

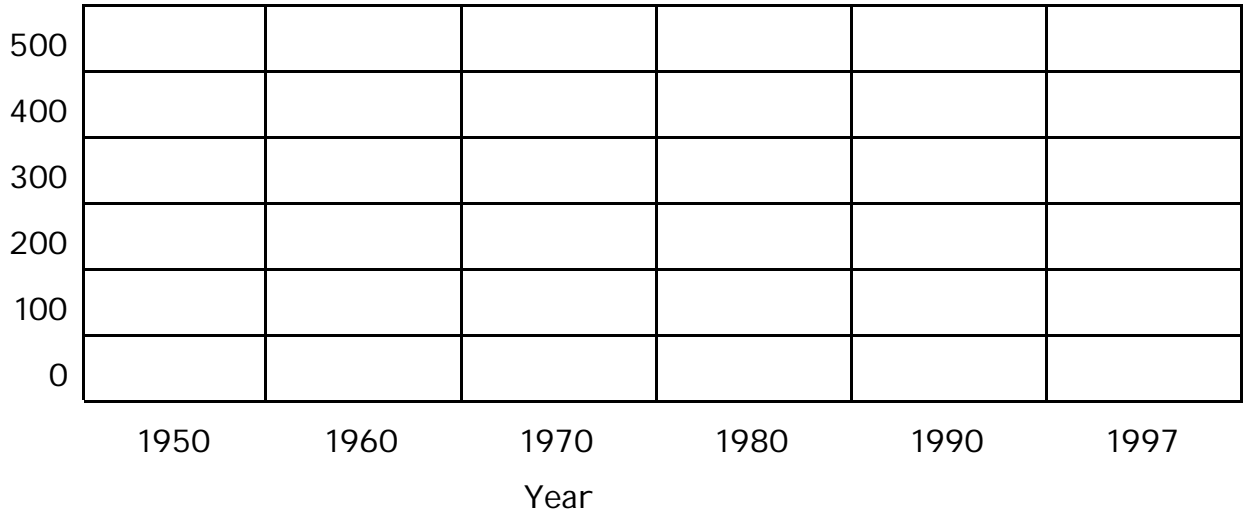
Peanut Math

Graphing Activity

Using the information from Peanut Math complete the following graphs showing the number of acres of peanuts harvested.

Acres of Peanuts Harvested

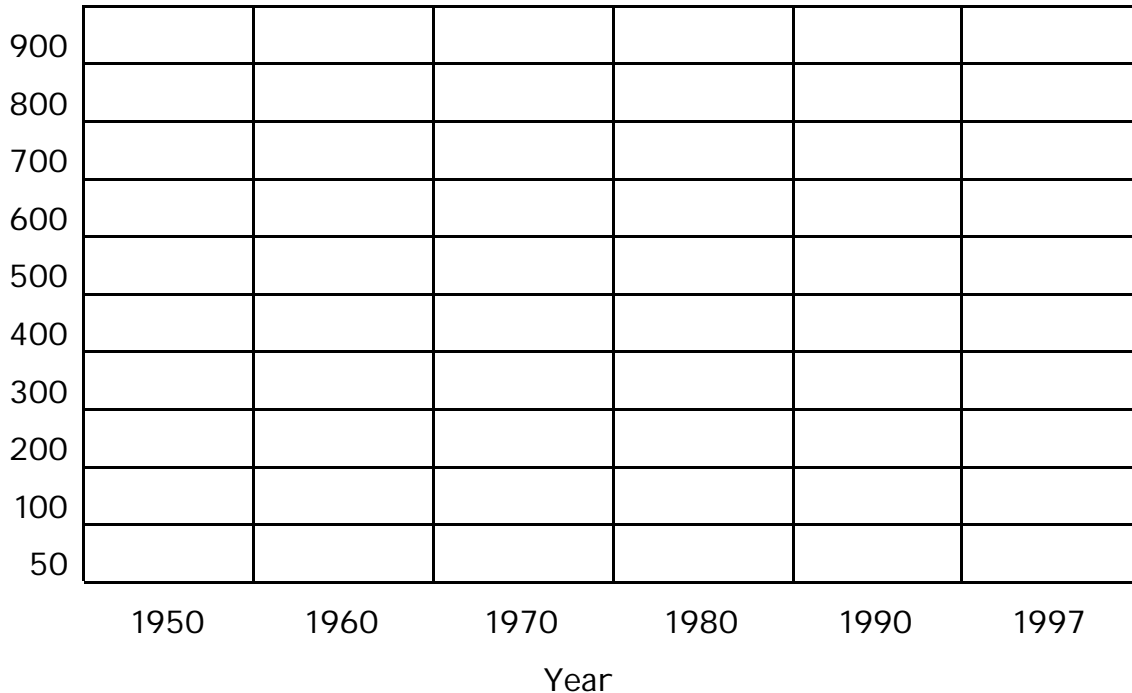
Acres (thousands)



Using the information from Peanut Math graph the number of pounds of peanuts harvested for each year. For extra credit calculate how many tons of peanuts were harvested each year.

Pounds of Peanuts Harvested

Pounds (millions)



Planting a Peanut Garden

How the Peanut Plant Grows

Unlike other nuts, peanuts do not grow on trees. In fact, the peanut is not a nut at all! It is a legume, in the pea family. The peanut is unusual because it grows on a plant which flowers above the soil but fruits below it. A farmer usually plants his peanuts in April or May. Once planted, peanut seeds grow into a green, oval shaped plant which reaches about 18 inches in height when fully mature. Small yellow flowers appear on the lower part of the plant as it begins to grow. These flowers pollinate themselves and then lose their petals as the fertilized ovary begins to enlarge. The enlarged ovary, called the peg, grows down and away from the plant forming a small stem which extends to the soil. The peanut embryo is the tip of the peg, which penetrates the soil. The embryo begins to develop once underground, growing into a peanut. From planting to harvesting, the growth cycle of a peanut takes four to five months.

Objectives

- The student will follow step-by-step instructions to plant a peanut.
- The student will create a chart or journal to record the growth of their peanut plant.

Materials

- Use student made bio-degradable pots from lesson "Making Your Own Planting Pots" or plastic or styrofoam cups.
- Sand or sandy loam soil (a good commercial potting mix works well)
- 3-5 raw peanuts for each student
- Plastic spoons
- Permanent markers
- Paper towels

Procedure

13. Use raw peanuts (usually found in the produce department or farmer's market). Soak them overnight.
14. Give each student the following list of instructions:
 - A. Get a cup or use bio-degradable pot made by students. Write your name on it with a permanent marker.
 - B. Make a small drainage hole in the bottom of your cup.
 - C. Place sand to within one inch of the top of your cup.
 - D. Plant 3-5 peanuts about 2 inches deep in the soil. Press the soil firmly, but do not pack.

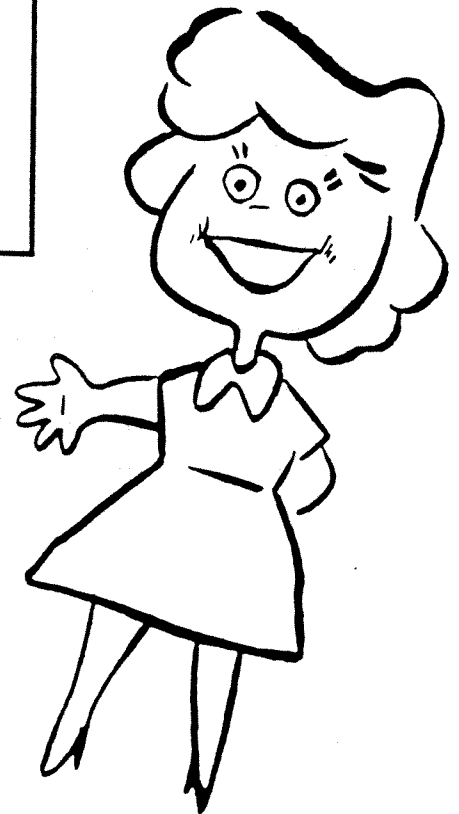
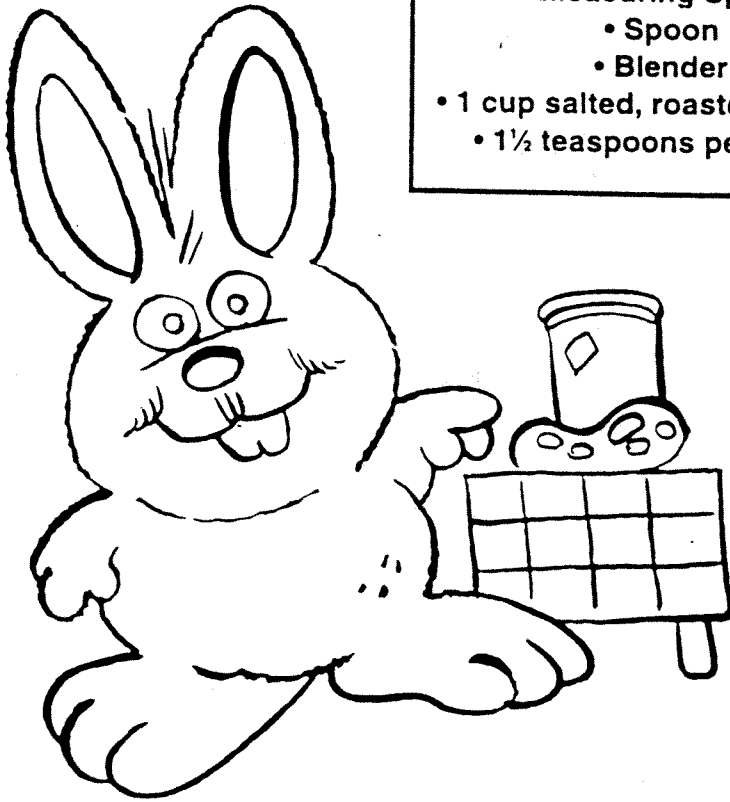
Name _____

Peanut Butter is Good for You!

Rudy the rabbit and his teacher are going to make peanut butter.

What will they need?

- Measuring Cup
- Measuring Spoon
 - Spoon
 - Blender
- 1 cup salted, roasted peanuts
- 1½ teaspoons peanut oil



How will they make it?

- Measure 1 cup peanuts and put in blender.
- Measure 1½ teaspoons peanut oil and put in blender.
 - Put top on blender.
- Push button and blend for about 3 minutes.
 - Turn blender off.
 - Take top off blender.
- Scrape sides of blender with spoon and push peanuts to bottom.
 - Put top on blender.
- Push button and blend for about 3 more minutes.
 - Take top off blender.
 - Scoop out peanut butter!

