

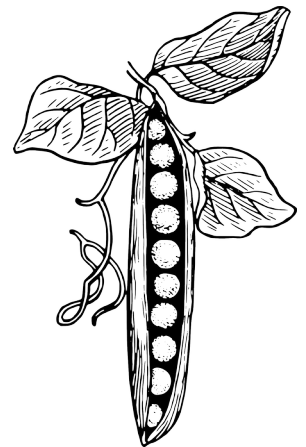
First Peas to the Table (Grades 3-5)

OVERVIEW: In Susan Grigsby's book *First Peas to the Table*, a class stages a contest like the one Thomas Jefferson had with his neighbors every spring to see who could grow the first bowl of peas. The students research Jefferson's experiments in gardening. They research how to grow peas, plant their own pea seeds, and keep a scientific journal of notes and drawings of their plants' progress. In this lesson, your students will compete in a similar contest, planting and growing peas and learning about Thomas Jefferson's gardening passion.

GRADES: 3-5

OBJECTIVES: The student will be able to:

- Explain Thomas Jefferson's spring pea contest, some of his contributions to agriculture, and the method he used to set up his garden.
- Describe the life cycle of a pea.
- Read and explain plant growth information on a seed packet.
- Grow and care for a pea from seed to pod.



MATERIALS:

The book *First Peas to the Table* by Susan Grigsby

Variety of pea seeds – enough for each student to have 8-10 seeds

Potting soil

Recycled containers (*empty and washed half-pint milk containers, yogurt containers, or any small container will drainage holes poked in the bottom.*)

Miscellaneous sticks, string, yarn, twine, etc. to build trellises

How to Grow Peas worksheet for each student

NOTE: *In New Jersey, peas cannot be planted outside until late-March, making it difficult to harvest an abundance of peas before school ends in June. So instead of growing a bowl of peas, the contest winner could be the student who grows the first peas to maturity. Another way to modify the contest would be to use edible pea pods instead. The winner of the contest could be the first to harvest five pea pods, or could be the student who harvests the most pea pods by a specified date before school ends in June.*

PROCEDURE:

Read aloud *First Peas to the Table* by Susan Grigsby. Discuss the contest. Allow the students time to reread the book together in small groups. Use the accompanying discussion questions to spur conversation about the book.

Pass out pea seed packages to students in small groups. Ask them to read the information on the back and answer the questions on the *How to Grow Peas* worksheet.

In late February or early March, students plant pea seeds indoors in potting soil in the small containers. Students care for their pea seeds on the windowsills until late-March, when they can be transplanted outside.

Students keep journals on the progress of their pea plants, including information such as: dates seeds were planted, observations of growth, measurements of weekly growth, drawings, dates trellises were added, etc.

Students transplant their peas into an allotted space in the outdoor garden. They continue to care for their pea plants over the next few weeks, watering as needed, perhaps adding fertilizer, and fashioning trellises for them to climb.

Determine the winner of the contest depending on the rules set at the beginning: student who grows first peas to maturity, student who first grows five pea pods, student with the most pea pods by harvest date, etc.

EVALUATION:

Students' detailed scientific journals on their experiences growing the peas.

EXTENSION:

Learn more about Thomas Jefferson's work in agriculture from the book *Thomas Jefferson Grows a Nation* by Peggy Thomas.

Learn about *thigmotropism*, the ability of vining plants like peas to respond to touch. Check out the Science Buddies lesson *How Vines Find Their Spines: Thigmotropism in Morning Glory Tendrils* at www.sciencebuddies.org under Science Projects.

New Jersey Learning Standards

Social Studies: 3-5: 6.1.5.EconNM.4, 6.1.5.HistoryCC.3

Science: 3:LS1.B 4:LS1.A 5:LS2.A

English Language Arts: 3:RL.3.1-7 4:RL.4.1-7 5:RL.5.1,2,4,5

NAME _____

How to Grow Peas

Use the information on the back of a pea package to help you answer these questions:

1. What is the variety (type) of the pea seed?
2. How deep should you plant the pea seeds?
3. How far apart should the pea plants be?
4. How far apart should you plant the rows of peas?
5. How many days will it take until you can harvest your peas?
6. How many weeks is that? How many months?
7. How long does it take seedlings to emerge (germinate)?
8. How much sun do pea plants like?
9. Look for New Jersey on the map of planting zones. When is it recommended to plant pea seeds outdoors?

First Peas to the Table Discussion Questions

In the story, Shakayla wins the contest. Discuss the questions below with the class to hypothesize how she might have won.

1. Maya's first group of successful pea plants was planted on March 1. What is the earliest date on which Shakayla's peas could have been planted. (Hint: On what day did the students receive their seeds?)
2. Can you write a mathematical equation to determine how much older Shakayla's plants could have been compared to Maya's? What is the answer?
3. Why did the first group of seeds that Maya planted fail?
4. Maya kept Jefferson's notes about soaking the pea seeds a "secret." Do you think that Shakayla may have also read about that idea? Where might she have found the information?
5. Thomas Jefferson would test many different varieties of the same plant to determine information such as which ones grew fastest, tasted best, and yielded the most food. Different varieties of a plant can grow at different rates. How many varieties did Maya plant? How many varieties did Shakayla plant? Do you think that some of the pea varieties could have grown faster than others? Can you look at some seed packets (or Internet seed sites) to investigate this further?
6. What kind of books does Maya see Shakayla carrying home? Why do you think she was reading them?
7. What factors do you think might have helped Shakayla to win the contest? Think beyond the story in the book to come up with additional answers. Make a class list, noting which are supported by clues in the book and which are based on your knowledge of plants' needs.
8. Ask the students to use the list in question #7 to form some hypotheses that they could test in the classroom or school garden. Discuss how to set up the experiments and record the data. Then let students test their ideas.