

SC Farm Bureau Ag in the Classroom Post Office Box 754 Columbia, SC 29202

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Grades K-8

# March's Monthly Book I Love Strawberries Written by Shannon Anderson Illustrations by Jaclyn Sinquett

#### **Book Summary:**

 Have you ever met someone who loves a specific kind of fruit? Jolie is head over heels for strawberries. She is determined to grow her own strawberries and help others experience and love strawberries too! Jolie has to work hard to prove to her parents that she can handle such a great task.



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# Lesson Plans Available Online at scfb.org/book-of-the-month

#### Did you know? (Ag Facts)

- Strawberries are one of the easiest fruits to grow and they're more flavorful than the ones at the grocery store because the sugar in the berries turn to starch soon after they are picked.<sup>1</sup>
- Strawberries need plenty of sunlight in order to grow.<sup>1</sup>
- June-bearing, everbearing, and day-neutral are the three different varieties of strawberry plants. The difference between the three are when and for how long each produces strawberries during the growing season. Jolie (in the read aloud) plants june-bearing strawberry plants in the story because those are the best fit for a home garden. Also, the fruit begins to show in June.<sup>1</sup>
- The book fast tracks the growth period that a typical strawberry would take. Usually they will not produce as much strawberries (product) in the first years of their life.<sup>1</sup>
- Have you ever been to a U-Pick or Pick-Your-Own farm? It sure is fun to pick your own fruits, vegetables, and even flowers. Check out your state's tourism or visitor's bureau to find local U-Pick farms in your area. Farmers charge a certain special price for the experience of picking your own produce crops.
  - <u>https://www.pickyourown.org/SC.htm</u>
  - <u>https://www.cottlestrawberryfarm.com/</u> (Hopkins S.C and Florence S.C.)

#### **Background Agricultural Connections:**

- Check out the South Carolina State's Cooperative Extension Program to find information about local strawberry growing.<sup>2</sup>
  - https://hgic.clemson.edu/factsheet/growing-strawberries/
  - https://hgic.clemson.edu/factsheet/strawberry-types/
- S. Cory Tanner, a reporter for the South Carolina Living magazine, states that March and April are good months for planting strawberry gardens. S. Cory Tanner is also an area horticulture agent and Master Gardener coordinator for the Clemson Agriculture Extension that is based in Greenville County. He also outlines the steps to take to give the best results for the season. He also mentions that for the first year you have to make sure that the plants don't flower because you want to force the plant to focus on growing healthy roots. After this year-long process and along with a lot of patience you will see healthy strawberries begin to blossom.<sup>3</sup>
- Strawberries can be traced back as far as the Romans, and perhaps even the Greeks. Medieval stonemasons carved strawberry designs on alters and around the tops of pillars in churches and cathedrals, symbolizing perfection and righteousness. During the same time period, strawberries were served at important state occasions and festivals to ensure peace and prosperity.<sup>4</sup>

- The most common explanation for how the strawberry got its name is that children in the nineteenth century threaded the berries onto straws and offered them for sale. Fresh strawberries began to flourish in California in the 1950s due to improved cultural technologies.<sup>4</sup>
- Strawberries are among the top three most frequently consumed fruits, and consumption is steadily increasing. Kids and adults report strawberries as their favorite fruit, with U.S. household consumption rising to nearly 71 percent.<sup>4</sup>

#### **Book Discussion Questions**

- What are the steps that Jolie takes to convince her parents that she is ready for the task of growing her own strawberry plants?
- Why do Jolie's parents hesitate to let her grow her own garden?
- What is the theme of this story?
- What did Jolie learn from this experience?
- What do you predict Jolie is going to do next based off of the last page of the book?

#### Agricultural Vocabulary:

- strawberry any of various low perennial herbs with many runners and bearing white flowers followed by edible fruits having many small achenes scattered on the surface of an enlarged red pulpy berry<sup>10</sup>
- Integrated Pest Management a strategy that prevents their crops from damaging pests.<sup>2</sup>
- garden a small piece of ground used to grow vegetables, fruit, herbs, or flowers.
- june-bearing- The name June-bearing is somewhat confusing since these varieties bear most of their crop in April and May. They produce a single crop in the spring, and flower production ceases as temperatures increase. This is a type of strawberry.<sup>11</sup>
- everbearing- a type of strawberry that produces a crop during the spring, and another in late summer, and additional fruit until frost in the fall.<sup>11</sup>
- day-neutral a type of strawberry that produces a crop during the spring, and another in late summer, and additional fruit until frost in the fall. Also can be grown in the higher elevations of western South Carolina for a spring and fall crop of berries.<sup>11</sup>

#### Activities:

#### Any Grade: Fun Coloring Activity

https://www.feedingmindspress.com/files/l\_love\_strawberries\_coloring\_pages.pdf

#### Kindergarten: Strawberry Farm Map

- Using Google Maps/Earth (search engine) locate and plot locations of various strawberry (or any fruit/vegetable) farms around the state of South Carolina.
- Create a map key so that others can read and interpret the map that you created.
- This could be done on the smart board or with pencil and paper.
- Materials: Map provided at end of the plans.

#### Grade 1:

- **U-Pick Activity:** Students will be able to communicate figures and facts about the U.S. strawberry industry. <sup>5</sup>
  - <u>CLICK HERE</u> to access the Feeding Minds Press Educators Guide resource.

#### Grades 2-5: Strawberry Themed Word Problems

• <u>CLICK HERE</u> to access the word problem worksheets.

#### Grades K-2:

**Freshest Fruit:** Students determine where fruits grow and their nutritional value by completing an activity to observe the size, shape, texture, and seeds of various fruits.

Shortened version of the lesson provided below. <sup>6</sup>

If you would like to read the entire AG lesson: CLICK HERE

Activity 1: Fruit Characteristics and Nutritional Value

- Paper towels
- One different type of fresh fruit for each group (Example: apple, peach, kiwifruit, orange, avocado, strawberry, grapes)
- Rulers
- As I See It handout (for each student)

Activity 2: Tree, Bushes, and Vines

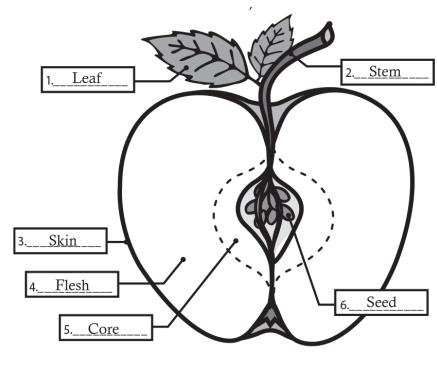
- Set of Fruit Cards
- Set of What Am I Cards (for each student group)
- The Fruits We Eat by Gail Gibbon

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Activity 1: Fruit Characteristics and Nutritional Value

- 1. Prior to class, cut each of your fresh fruits in half.
- 2. Before group work begins, display the entire selection of fruits for the students to observe. Hold each fruit up in front of the class and discuss the similarities and differences in the skin, seeds, and flesh. Explain how each fruit is grown.

- 3. Organize students into groups of two or three. Give each group one half of a piece of fruit. Not all groups will have the same type of fruit. Instruct students to examine the inside of the fruits and complete the As I See It handout.
- 4. After students complete the handout, discuss the answers as a class. Have students hold up their fruit for all of the class to see and point out the seed, flesh, and skin. Discuss the purpose of these different parts.



- 5. Have students find the listed percentage of vitamin C for their fruit. Students ages 4-8 need 1 to 1 and 1/2 cups of fruit per day. Students ages 9-13 need 1 and 1/2 cups of fruit per day.
- 6. These are listed on the *As I See It* handout. Call on each group and ask them for the % vitamin C in their fruit. Write the numbers on the board and make a bar graph for students to see.
- 7. Ask students to look at the bar graph and determine which two fruits are the best sources of vitamin C. Discuss how vitamin C plays an important role in our diets.

Activity 2: Trees, Bushes, and Vines

- 1. Use the *Fruit Cards* to review a few facts about each fruit. Discuss the color of the fruit and whether the fruit grows from a tree, bush, or vine.
- 2. Ask the following questions; "Do you like to eat this fruit?" "Where can you purchase this fruit?" "What is your favorite fruit to eat?" "What are some ways farmers harvest their fruit?"

- 3. Divide students into groups of 4. Distribute one set of Who Am I? Cards per group, glue or tape, and 2 pieces of white paper.
- 4. Give oral instructions. First, students should solve all of the addition and subtraction problems and record the answer directly behind the "=" sign on each card.
- 5. Next, students will pair the cards with the same sum. For example a card with the equation 2 + 2 = 4 will match with the card 5 1 = 4.
- 6. Last, instruct the student groups to read the description of the fruit, paying close attention to where the fruit can be found growing; a tree, bush, plant, or vine and the color of the fruit. Each fruit description has a matching fruit card printed in the color of the identified fruit.
- 7. Once the match is found, tape or glue matching boxes together with the first card as the fruit description and the second card as the matching fruit onto the white paper.
- 8. Ask each group of students to stand and read one of their matching cards.
- 9. For reinforcement and more understanding, read the book *The Fruits We Eat* written by Gail Gibbons. Point out the different types of fruits, their characteristics, and where they can be found growing; in an orchard on a tree, plant, vine, or on a bush. Discuss fruits that are grown in your local area.

# Grades 1-5: Life Cycle of a Strawberry Plant<sup>®</sup>

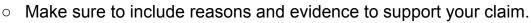
- As a class, create a chart or poster illustrating the life cycle of a strawberry plant. Upper grades can add what labels to explain what the plant needs to grow or what a lack of a certain resource will cause the plant to do.
- Could introduce the idea of a life cycle of a strawberry plant through this youtube Video.
- Resource: <u>https://www.ncfb.org/wp-content/uploads/2021/01/FINAL-ag-mag-strawberr</u> <u>y-WEB.pdf</u>

## Fun Activity - Where Does Your Food Come From?

- Prior to the activity, ask the students to find a food item with a product of origin label at home. (Be prepared with extra food and a computer at school for students who are unable to complete this assignment at home.)
- Have each student complete the <u>Where Does My Food</u> <u>Come From?</u> activity sheet by using <u>National</u> <u>Geographic's Mapmaker Interactive</u><sup>9</sup> (You could also use Google Earth) to find the distance between their food's country of origin and the town in which they live. Instructions are found on the activity sheet. This can be completed as a homework assignment or in school depending on computer access.
- As a class, locate the origin of each child's food on a world map. Students can label each location on the activity sheet world map. Compare the distances and determine whose food traveled the farthest and shortest distances.
- Discuss the different ways the food could have traveled to a local grocery store (truck, airplane, train, boat, etc.). What steps need to be taken to ensure that the food doesn't spoil before arriving at the market?
- What are some possible reasons the food traveled so far? Discuss how the climate of a particular location affects what foods can be grown there.
- Identify the different jobs involved in getting food from the farm to the table (e.g., grower, harvester, truck driver, packagers, processors, warehouse operators, grocers, etc.).

# Grades K-5: Opinion Writing: Adapt this to suit your grade level expectations

- What is your favorite fruit? Why?
- Have students write an opinion writing piece about their favorite fruit.



# Grades 3-4: Strawberry Patch Arrays

- Have students create a rectangular garden and create several different arrays.
- Start by giving them the product and having them create the arrays.



Bananas, a product of Equador.



Ginger root, a product of China.



Coconut, a product of Dominican

- Then have students create the array and write the multiplication fact that goes along with it.
- Have them write both the multiplication equation and the repeated addition equation.
- See if they can represent the same product (ex. 24) in a variety of ways (6x4, 12x2, 8x3)

# Grades 6-8

**DNA: Expressions in Agriculture**<sup>7</sup> - This lesson centers around the activity of extracting DNA from a strawberry while highlighting careers in biotechnology and agriculture.

CLICK HERE to view the entire lesson

Extension Activity:

• https://southcarolinamatrix.agclassroom.org/matrix/resource/284/

## **Extension Activities/Connections:**

- Harvest Year by Cris Peterson
- The Thing About Bees: A Love Letter by Shabazz Larkin
- <u>Life Cycle: Strawberries</u>
- The Very Berry Counting Book
- First Woman and the Strawberry
- The Grey Lady and the Strawberry Snatcher
- Five Senses Strawberry Book
- <u>Strawberries are Red</u>
- <u>Strawberry Girl</u>
- <u>Do Turtles Eat Strawberries</u>
- <u>Strawberry Activity Ideas</u>

Map Activity:



### Standards:

Kindergarten:

K.G.1 Identify a map, various map features, and explain the purpose of maps. This
indicator was developed to encourage inquiry into the purpose of maps and begin to
recognize how the parts of maps are used to gain information (e.g., map title, map
key/legend). This indicator was also developed to encourage the use of positional words
used to describe locations on maps.

#### Grade 1:

• 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

Grade 2:

- 2.ATO.1 Solve one- and two-step real-world/story problems using addition (as a joining action and as a part-part-whole action) and subtraction (as a separation action, finding parts of the whole, and as a comparison) through 99 with unknowns in all positions
- 2.NSBT.6 Add up to four two-digit numbers using strategies based on knowledge of place value and properties of operations.
- 2.NSBT.5 Add and subtract fluently through 99 using knowledge of place value and properties of operations

• 2-LS2-1. Plan and conduct an investigation to determine what plants need to grow Grade 3:

- 3.NSBT.2 Add and subtract whole numbers fluently to 1,000 using knowledge of place value and properties of operations.
- 3.MDA.5 Understand the concept of area measurement.

• Standard 1: Write arguments to support claims with clear reasons and relevant evidence.

Grade 4:

- 4.NSBT.5 Multiply up to a four-digit number by a one-digit number and multiply a two-digit number by a two-digit number using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using rectangular arrays, area models and/or equations.
- 4.NSBT.5 Multiply up to a four-digit number by a one-digit number and multiply a two-digit number by a two-digit number using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using rectangular arrays, area models and/or equations.

• Standard 1: Write arguments to support claims with clear reasons and relevant evidence.

#### Grade 5:

- 5.NSBT.5 Fluently multiply multi-digit whole numbers using strategies to include a standard algorithm.
- 5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

### Sources:

- 1. https://www.almanac.com/plant/strawberries
- 2. I Love Strawberries by Shannon Anderson
- 3. https://scliving.coop/home--garden/patience-pays-with-strawberry-plants/
- 4. https://cdn.agclassroom.org/ca/resources/fact/strawberries.pdf
- 5. <u>https://www.feedingmindspress.com/files/Sample\_Lesson\_%20I\_LOVE\_St</u> <u>rawberries.pdf</u>
- 6. https://southcarolinamatrix.agclassroom.org/matrix/lesson/322/
- 7. https://southcarolinamatrix.agclassroom.org/matrix/lesson/381/
- 8. <u>https://www.youtube.com/watch?v=yvSssDpCkE0</u>
- 9. <u>https://www.ncfb.org/wp-content/uploads/2021/01/FINAL-ag-mag-strawberr</u> <u>y-WEB.pdf</u>
- 10. <u>https://www.vocabulary.com/dictionary/strawberry</u>
- 11. https://hgic.clemson.edu/factsheet/strawberry-types/