

SC Farm Bureau  
Ag in the Classroom  
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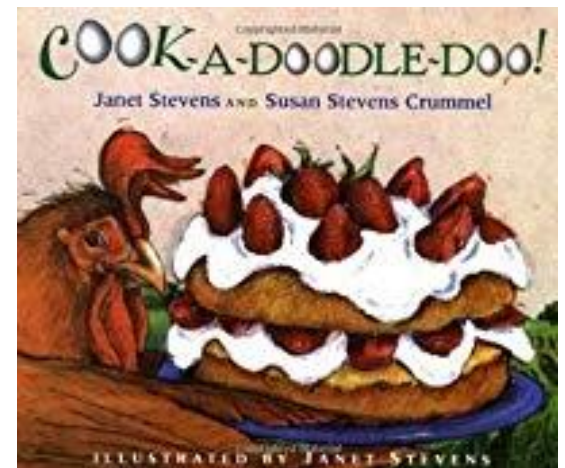
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### *Cook-A-Doodle-Do!*

By: Janet Stevens and Susan Stevens Crummel

Big Brown Rooster is sick of chicken feed. So along with his friends--Turtle, Iguana, and Potbellied Pig--he sets out to make the most magnificent strawberry shortcake in the whole wide world. But there's one problem: none of his friends knows how to cook! The team bravely forges ahead, and with Rooster's help, they learn how to measure flour (not with a ruler) and how to beat an egg (not with a baseball bat). But can they keep Pig from gobbling up all the ingredients? Take an old family recipe, add four funny friends, and mix in some hilarious cooking confusion and you have a picture book treat for children of all ages! <sup>1</sup>



#### **Did You Know? (Ag Facts) <sup>2</sup>**

- On average, there are 200 tiny seeds in every strawberry.
- One cup of strawberries is only 55 calories!
- California produces 75% of the nation's strawberry supply, but you can find strawberries growing in every state.

#### **Discussion Questions**

- How would you feel if you were Rooster at the beginning of the story?
- Explain the similarities and differences to The Little Red Hen.
- Why is teamwork important to this story?

Grade Level(s): K-5

Purpose: Students will identify the structure and function of six plant parts, classify fruits and vegetables according to which parts of the plant are edible, and

Vocabulary:

- **recipe:** a list of ingredients and instructions for making something, especially a food dish
- **ingredient:** a component of a mixture, especially an item of food or flavoring included in the recipe for preparing a dish
- **flowers:** contain the parts of the plant necessary for reproduction
- **fruit:** the part of the plant that contains seeds
- **leaves:** use energy from sunlight to carry out photosynthesis
- **roots:** act as an anchor, holding the plant in place
- **seeds:** grow into new plants
- **stems:** provide support for leaves, flowers, and fruit

Background Agricultural Connections <sup>3</sup>

The fruits and vegetables we eat come from parts of plants. Flowering plants have six main parts—roots, stems, leaves, flowers, fruits, and seeds. Each plant part serves a different function.

**Roots** act as anchors, holding a plant in place. They take up water and nutrients a plant needs from the soil. Roots can also store extra food for future use. Beets, carrots, radishes, and turnips are examples of edible roots.

**Stems** provide support for leaves, flowers, and fruit. Water, nutrients, and sugars travel to and from other parts of the plant through the stem. Asparagus is a stem that can be eaten. Potatoes, often mistakenly thought to be roots, are actually enlarged underground stems called tubers.

**Leaves** use energy from sunlight to carry out photosynthesis and make food for the plant. Edible leaves include arugula, cabbage, lettuce, mint, and spinach. Celery and rhubarb, commonly thought to be stems, are actually the part of a leaf called the leaf stalk or petiole.

**Flowers** contain the parts of the plant necessary for reproduction and play an important role in pollination. The shapes, colors, and scents of some flowers attract insect and animal pollinators. Following pollination, the fertilization process occurs within the flower. During fertilization, the ovary swells and seeds are produced. The flowers of some plants are edible. Broccoli and cauliflower are flowers that can be eaten.

**Fruit** is the part of the plant that contains seeds. This botanical definition includes many foods that are typically considered to be vegetables, such as cucumbers and green peppers, as well as more commonly recognized fruits, such as apples, oranges, bananas, and strawberries.

**Seeds** have three parts—the embryo, the endosperm, and the seed coat. The embryo grows into a new plant, the endosperm provides nutrients for the embryo, and the seed coat is the protective outer covering that encloses the embryo. With proper conditions, seeds will grow into new plants. Corn, wheat, peanuts, black beans, and sunflower seeds are examples of edible seeds.

It is important for students to understand that not all roots, stems, leaves, flowers, fruits, and seeds are edible and that some may even be harmful to humans if eaten. Stress the importance of not eating parts of wild plants unless a trusted adult is confident that the plant parts are safe to eat.

# "Sweet" Strawberry Information

According to the Guinness Book of World Records, the biggest strawberry ever grown weighed over 8 ounces. It was grown in Kent, England in 1983. A strawberry in Vermont was grown recently that was over 5 inches long and as big as a man's hand!

Strawberries like soil that is a little bit sandy. Strawberry farmers plant the berries on hills called *raised beds*. The hills are covered with plastic. The plastic keeps the plants warm and stops weeds from growing.

Strawberries grow in every state in the United States and in every province in Canada. California grows the most strawberries in the U.S.A. If all the strawberries that grow in California in one year were lined up next to each other, they would go around the world 15 times!

It takes about 1 month for a strawberry to grow from a flower. It takes about 3 days for a strawberry to turn from green to white to red. One plant can have green, white, and red strawberries growing on it at the same time.

All strawberries that grow on a farm are picked by hand. As soon as they are picked, the strawberries are taken to a room to cool them down. A special refrigerated truck takes them to stores.



## *Cook-A-Doodle-Do!*

### Materials:

- *Cook-A-Doodle-Do!* Book
- Venn diagram

### Procedures:

#### (Before Reading)

1. Have students look at the cover of the book and make predictions. Ask several questions to activate their prior knowledge:
  - Who do you think the main character will be?
  - What other stories have you read that have a chicken as a main character?
2. Display the following questions on the board while you read the story:
  - Who is Rooster's Great-Grandmother?
  - How do Dog, Cat, and Goose respond to Rooster?
  - What does Rooster find to help him?
  - What does Iguana think beating an egg means?
  - How does Pig try to measure  $\frac{2}{3}$  cup of milk?
  - What happens to the shortcake after it is finished?

#### (During Reading)

1. As a class, discuss answers to the comprehension questions:
  - Who is Rooster's Great Grandmother? Little Red Hen.
  - How do Dog, Cat, and Goose respond to Rooster? They do not want to help him cook and do not think that he can do it.
  - Who does Rooster find to help him? Turtle, Iguana, and Pig.
  - What does Iguana think beating an egg means? To hit an egg with a baseball bat.
  - How does Pig try to measure  $\frac{2}{3}$  of milk? He wants to cut off  $\frac{1}{3}$  of a cup or drink  $\frac{1}{3}$  of the cup.
  - What happens to the shortcake after it is finished? Iguana tripped while taking it to the table.

#### (After Reading)

1. Now that you have read the story, compare some of the characters using a Venn Diagram.
2. Pass out Venn Diagram worksheet to students.
3. Model how to complete a Venn Diagram by comparing Rooster and Little Red Hen.
4. Students work in partners or independently and fill out their own Venn Diagram for two characters of their choice.
5. As a class, talk about the different characters that students compared on their Venn Diagrams.

## Plant Drama <sup>3</sup>

### Materials:

- Live strawberry plant or Parts of a Strawberry Plant Poster\*
- *Parts of a Plant Template 1* copied on colored paper, 1 per student
- *Parts of a Plant Template 2* copied on white paper, 1 per student
- Green paper, 1 sheet per student
- Hole punch
- Brown yarn

\*The Parts of a Strawberry Plant Poster is available for purchase from [agclassroomstore.com](http://agclassroomstore.com).

### Procedures:

3. Show students the *Parts of a Strawberry Plant* poster or a live strawberry plant. Point out the roots, stems, leaves, flowers, fruit, and seeds of the plant.
4. Using the information found in the *Background Agricultural Connections* as a guide, explain the functions of each plant part.
5. Have the students act out each part of the plant:
  - **Roots:** Sit on the ground, and pretend to anchor yourself in place to represent roots holding a plant in place. Make sucking noises to represent the water and nutrients being absorbed from the soil.
  - **Stems:** Stand up straight to represent a stem supporting leaves, flowers, and fruit. Move your arms up your body from your feet to your head. This represents water, nutrients, and sugars moving through the stem.
  - **Leaves:** Hold hands high in the air to represent leaves receiving energy from the sun to make food for the plant.
  - **Flowers:** Make fancy poses to represent a flower attracting pollinators.
  - **Fruit:** Pretend to hold a baby to represent the fruit protecting the seeds.
  - **Seeds:** Roll into a ball on the ground and then slowly begin to stand up to represent a seed sprouting and growing into a new plant.
6. Provide each student with a copy of *Parts of a Plant Template 1*. Have students cut out the flowers and fold up each petal on the dotted line.
7. Twist green paper into the shape of a stem, and attach it to the back of the flower. Cut out leaf shapes, and attach them to the stem.
8. Use a hole punch to make holes at the bottom of the stem, and tie brown yarn through the holes to represent roots.
9. Using the strawberry plant or *Parts of a Strawberry Plant* poster as a reference, have the students attach each plant part from *Parts of a Plant Template 2* onto the corresponding petal.

## Edible Plant Parts <sup>3</sup>

### Materials:

- *Eating the Alphabet* by Lois Ehlert
- *Plant Part Chart*
- *Fruit and Vegetable Cards*
- Copy paper
- Hole punch
- Yarn
- 6 hula hoops
- Plant parts cards

### Procedures:

1. Before this activity, make six plant parts cards: ROOT, STEM, LEAF, FLOWER, FRUIT, SEED.
2. Read *Eating the Alphabet* by Lois Ehlert.
3. Identify examples of roots, stems, leaves, flowers, fruit, and seeds from the book. Refer to the *Plant Part Chart*.
4. Have students make fruit and vegetable “beanbags” using the *Fruit and Vegetable Cards*. Place each fruit and vegetable page on top of a piece of blank copy paper. Cut out the two pages together around the dashed lines for each fruit or vegetable.
5. Punch holes around the outside edges of each fruit or vegetable card. Put crumpled paper between the two sheets of cut-out paper and use yarn to sew around the edge of each “beanbag.” Staples can be used as an alternative to sewing with yarn.
6. Place six hula hoops on the floor. Lay plant part cards inside each hula hoop to distinguish them as roots, stems, leaves, flowers, fruit, or seeds.
7. Separate the class into two teams. Each student will determine which edible plant part is shown on their beanbag and then try to throw it into the correct hula hoop.
  - **Roots:** beets, carrots, radish
  - **Stems:** kohlrabi, asparagus, potato
  - **Leaves:** cabbage, spinach, lettuce
  - **Flowers:** artichoke, broccoli, cauliflower
  - **Fruit:** cherries, apple, grapes
  - **Seeds:** sunflower seeds, corn, peanuts
8. Each player can earn three points for their team. Two points can be earned for correctly identifying the edible part of the plant. An additional point can be earned if their beanbag lands in the correct hula hoop. The team with the most points wins.



## Enriching Activities

- Have students complete Trail Mix activity sheet as they make their own trail mix.
- Use this [PBS Learning Media](#) activity to convert fractions while cooking.
- Discuss sidebars of information in book. This is a fictional text, but there is nonfiction located in the sidebars that teaches you more about cooking.
- Bring strawberry shortcake for the class to enjoy! 😊

## Suggested Companion Resources

- [Tops and Bottoms](#) (Book)
- [Parts of A Strawberry Plant](#) (Poster)
- [Jr. Sprout – Healthy Eating](#) (Booklets & Readers)
- [Strawberry](#) (Encyclopedia Article)
- [Jammer Videos](#) (From The Florida Strawberry Growers Association)
- [Pick Your Own](#) (Website) – Find where you can pick your own strawberries!

## Sources/Credits

1. Steven, J. and Crummel, S. (1999). *Cook-A-Doodle-Do!* New York: HMH.
2. University of Illinois Extension
3. Utah Agriculture in the Classroom

## Suggested SC Standards Met:

### English/Language Arts -

- K.RL.5.1 With guidance and support, ask and answer who, what, when, where, why, and how questions about a text; refer to key details to make inferences and draw conclusions in texts heard or read.
- K.RL.5.2 With guidance and support, ask and answer questions to make predictions using prior knowledge, pictures, illustrations, title, and information about author and illustrator.
- K.RL.6.1 Describe the relationship between illustrations and the text.
- K.RL.7.1 With guidance and support, retell a familiar text; identify beginning, middle, and end in a text heard or read.
- K.RL.7.2 Read or listen closely to compare familiar texts.
- K.RL.8.1 With guidance and support, read or listen closely to: a. describe characters and their actions; b. compare characters' experiences to those of the reader; c. describe setting; d. identify the problem and solution; and e. identify the cause of an event.
- 1.RL.5.1 Ask and answer who, what, when, where, why, and how questions to demonstrate understanding of a text; use key details to make inferences and draw conclusions in texts heard or read.
- 1.RL.5.2 Make predictions using prior knowledge, pictures, illustrations, title, and information about author and illustrator.
- 1.RL.6.1 Describe the relationship between the illustrations and the characters, setting, or events.
- 2.RL.5.1 Ask and answer literal and inferential questions to demonstrate understanding of a text; use specific details to make inferences and draw conclusions in texts heard or read.
- 2.RL.5.2 Make predictions before and during reading; confirm or modify thinking.
- 2.RL.8 Analyze characters, settings, events, and ideas as they develop and interact within a particular context.
- 3.RL.5.1 Ask and answer literal and inferential questions to determine meaning; refer explicitly to the text to support inferences and conclusions.
- 3.RL.8 Analyze characters, settings, events, and ideas as they develop and interact within a particular context.
- 4.RL.5.1 Ask and answer inferential questions to analyze meaning beyond the text; refer to details and examples within a text to support inferences and conclusions.
- 4.RL.6.1 Determine the development of a theme within a text; summarize using key details.
- 4.RL.8 Analyze characters, settings, events, and ideas as they develop and interact within a particular context.
- 5.RL.5.1 Quote accurately to analyze the meaning of and beyond the text to support inferences and conclusions.
- 5.RL.6.1 Determine and analyze the development of a theme within a text; summarize using key details.
- 5.RL.8 Analyze characters, settings, events, and ideas as they develop and interact within a particular context.

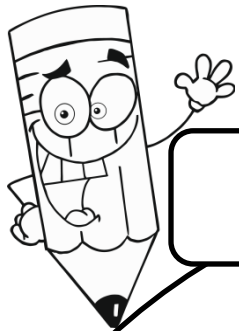


Science –

- 1.L.5: The student will demonstrate an understanding of how the structures of plants help them survive and grow in their environments.
- 4.L.5: The student will demonstrate an understanding of how the structural characteristics and traits of plants and animals allow them to survive, grow, and reproduce.

Name: \_\_\_\_\_

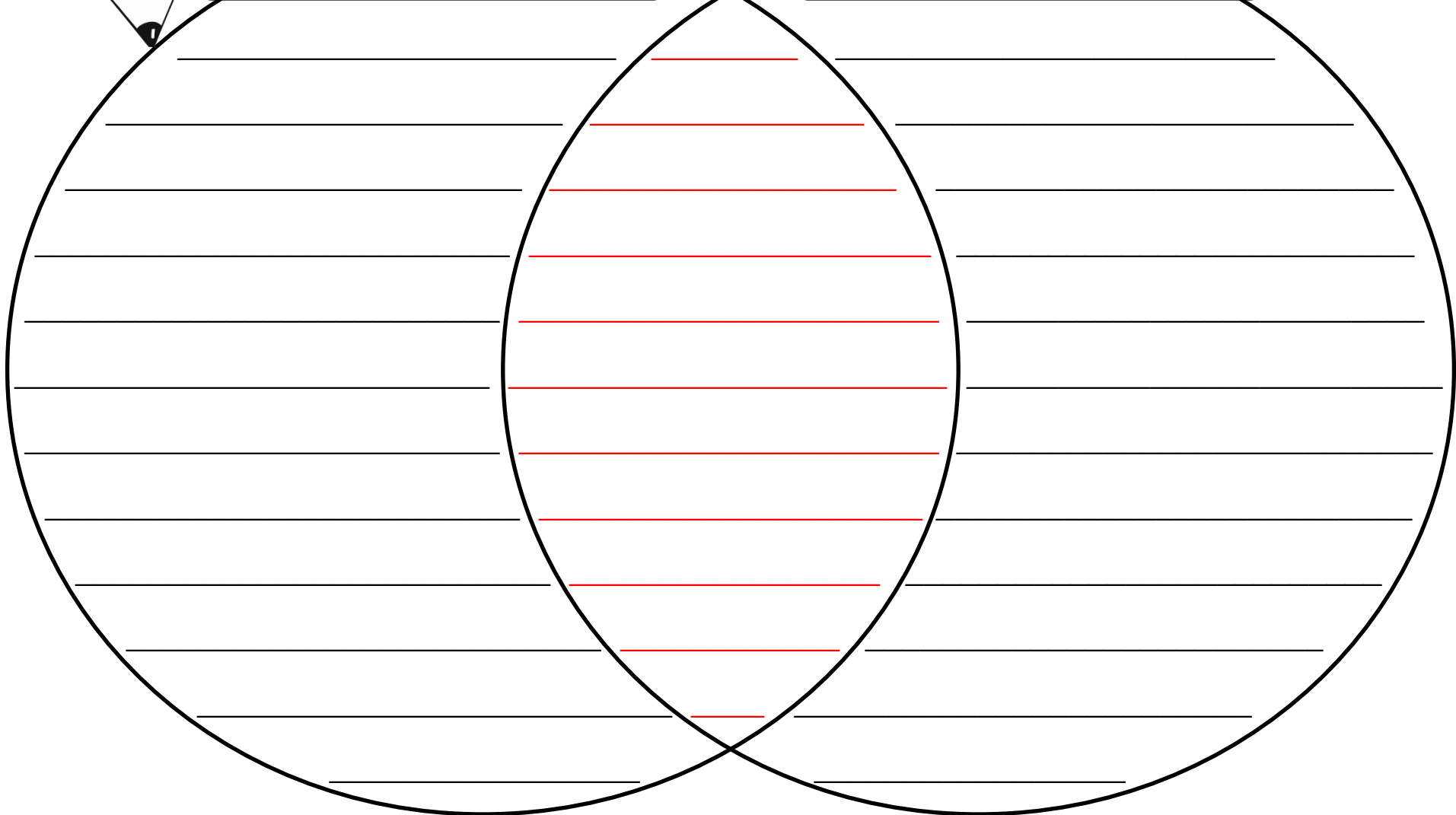
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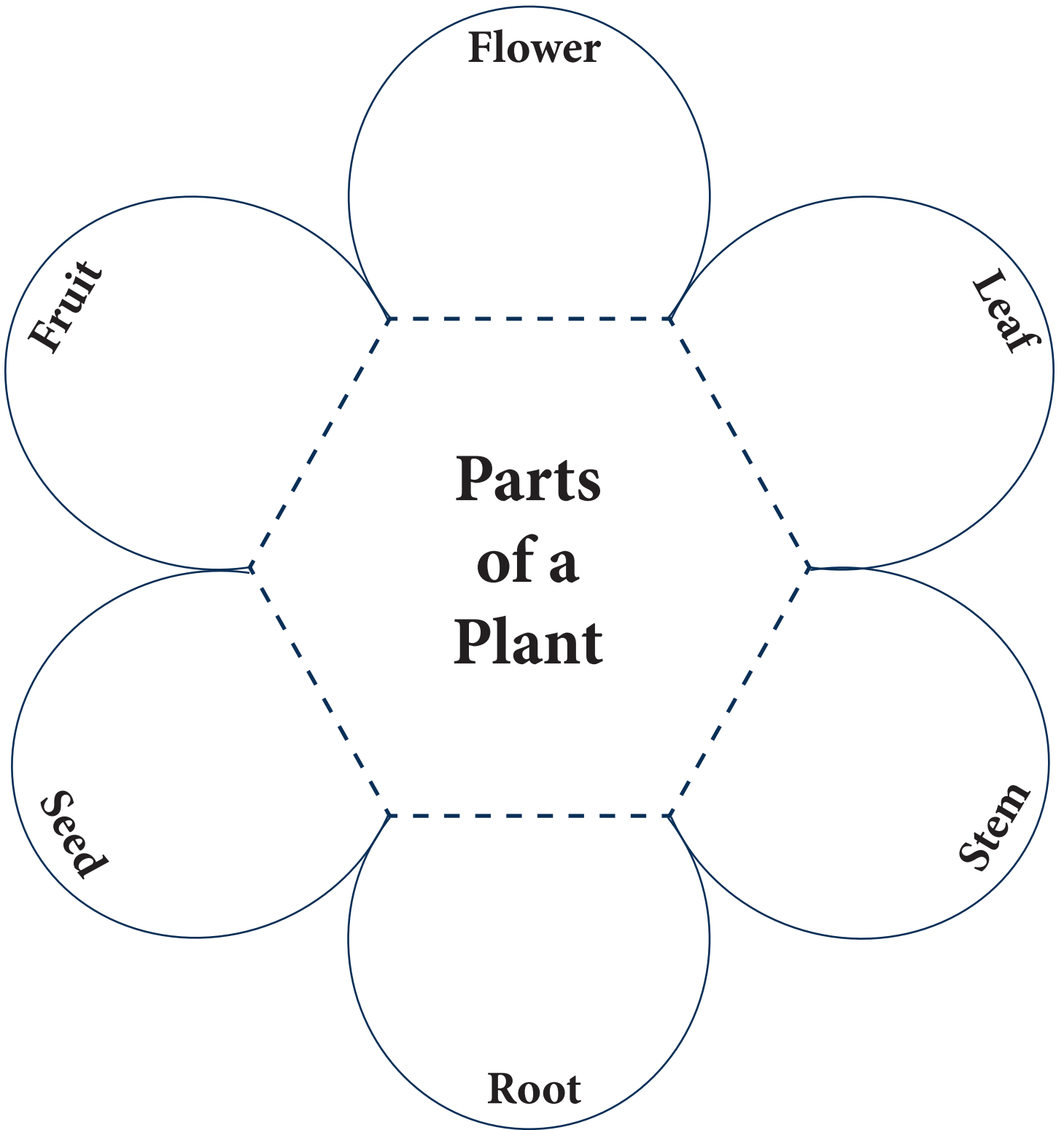
# Venn Diagram

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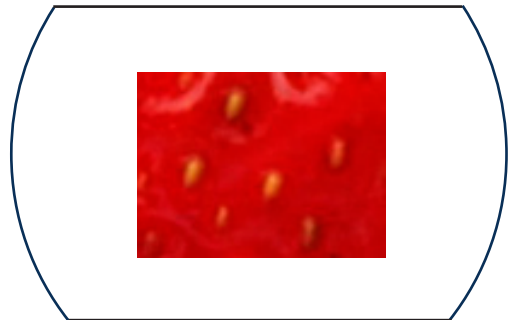
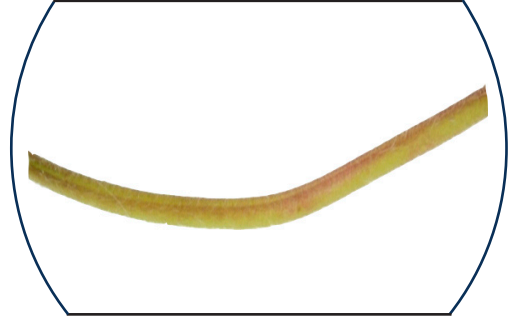
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# Parts of a Plant Template 1



## Parts of a Plant Template 2



# Plant Part Chart

apricot (fruit)  
 artichoke (flower)  
 avocado (fruit)  
 apple (fruit)  
 asparagus (stem)

**Aa**

blueberry (fruit)  
 brussels sprout (leaf)  
 bean (seed)  
 beet (root)  
 broccoli (flower)  
 banana (fruit)

**Bb**

currant (fruit)  
 corn (seed)  
 celery (leaf)  
 cucumber (fruit)  
 cabbage (leaf)  
 cauliflower (flower)  
 cherry (fruit)  
 carrot (root)

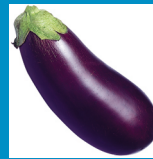
**Cc**

date (fruit)



**Dd**

endive (leaf)  
 eggplant (fruit)



**Ee**

fig (fruit)



**Ff**

gooseberry (fruit)  
 grapefruit (fruit)  
 grapes (fruit)



**Gg**

huckleberry (fruit)



**Hh**

Indian corn (seeds)



**Ii**

jalapeno (fruit)  
 jicama (root)



**Jj**

kumquat (fruit)  
 kiwifruit (fruit)  
 kohlrabi (stem)



**Kk**

leek (leaf)  
 lemon (fruit)  
 lettuce (leaf)  
 lime (fruit)



**Ll**

melon (fruit)  
 mango (fruit)



**Mm**

nectarine (fruit)



**Nn**

okra (fruit)  
 orange (fruit)  
 onion (leaf)



**Oo**

peach (fruit)  
 pineapple (fruit)  
 pear (fruit)  
 papaya (fruit)  
 plum (fruit)  
 persimmon (fruit)  
 pomegranate (fruit)  
 parsnip (root)  
 potato (stem)  
 pea (fruit)  
 pepper (fruit)  
 pumpkin (fruit)

**Pp**

quince (fruit)



**Qq**

rutabaga (root)  
 raspberry (fruit)  
 radish (root)  
 rhubarb (leaf)  
 radicchio (leaf)

**Rr**

swiss chard (leaf)  
 spinach (leaf)  
 star fruit (fruit)  
 strawberry (fruit)



**Ss**

turnip (root)  
 tangerine (fruit)  
 tomato (fruit)



**Tt**

ugli fruit (fruit)



**Uu**

vegetable marrow (fruit)



**Vv**

watermelon (fruit)  
 watercress (leaf)



**Ww**

xigua (fruit)



**Xx**

yam (root)



**Yy**

zucchini (fruit)



**Zz**



kohlrabi



cabbage



artichoke



cherries

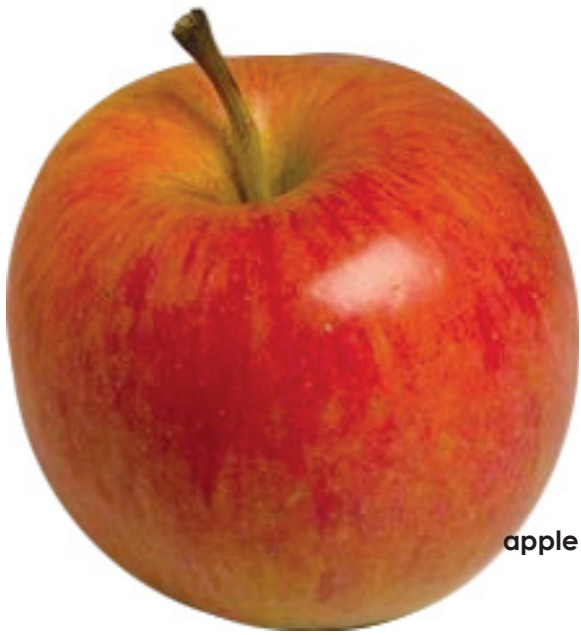


sunflower seeds



beets





apple



asparagus



spinach



broccoli



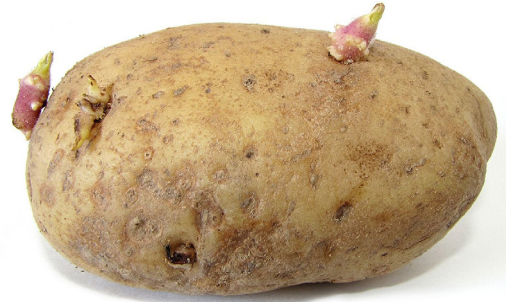
carrots



corn



grapes



potato



cauliflower



peanuts



lettuce



radish



# Trail Mix

Name \_\_\_\_\_



## Small Ingredients

**Must Total 1/2 cup (Use only 3)**

Chocolate Chips	\$0.75 for every 1/8 cup
M & M's	\$1.00 for every 1/8 cup
Gummi Bears	\$0.60 for every 1/8 cup
Peanuts	\$0.50 for every 1/8 cup

## Medium Ingredients

**Must Total 1/2 cup (Use 2)**



Gold Fish	\$1.10 for every 1/4 cup
Cheerios	\$1.25 for every 1/4 cup
Corn Pops	\$0.85 for every 1/4 cup



## Large Ingredients

**Must Total 1 cup (Use 2)**

Pretzels	\$2.00 for every 1/2 cup
Fruit Loops	\$1.90 for every 1/2 cup
Cheezits	\$2.40 for every 1/2 cup

\_\_\_\_\_ Trail Mix

**Small Ingredients (1/2 c total)**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Medium Ingredients (1/2 c total)**

\_\_\_\_\_  
\_\_\_\_\_

**Large Ingredients (1 c total)**

\_\_\_\_\_  
\_\_\_\_\_

1. How much would you spend on the small ingredients? \_\_\_\_\_
2. How much would you spend on the medium ingredients? \_\_\_\_\_
3. How much would you spend on the large ingredients? \_\_\_\_\_
4. How much would you spend total on the trail mix? \_\_\_\_\_

What would you spend if you made the trail mix four times? \_\_\_\_\_