

Outline of Lesson
Flowers and Advertising: Hey, Bee! Look at Me!
Unit 2, Lesson 9
Grade 1-3

Lesson Time: 60 Minutes

Lesson Outline:

1. Function of Flowers

- Parts and function of flowers
- Pollination and pollinators

2. Flowers: Clever Advertisers

- Definition of advertising
- Understanding and analyzing food advertisements

3. Incorporate all Concepts

- Create fruit and vegetable advertisements
- Read Bonita Broccoli story and dissect broccoli
- Healthy snack: broccoli florets

4. Thank you Notes

Student Learning Objectives:

By the end of this lesson students will:


- Have a basic knowledge of the parts of flowers and their functions in food production.
- List 3 ways that flowers act like advertisements to attract pollinators.
- Identify at least 2 tactics used by advertisers to sell food products.
- Know that broccoli is an edible flower that is a good source of Vitamins A and C and fiber.

References:

- Jaffe, Roberta and Appel, Gary. The Growing Classroom: Garden-Based Science. Dale Seymour Publications, 1990.
- Morris, J. L., Briggs, M., & Zidenberg-Cherr, S. Nutrition to grow on: a garden-enhanced nutrition education curriculum for upper-elementary schoolchildren. University of California, Davis, 2002.
- Pranis, Eve and Cohen, Joy. National Gardening Association's Grow Lab: Activities for Growing Minds. National Gardening Association, 1990.

Flowers and Advertising: Hey Bee! Look at Me!

Overview (for Teacher)

Pre-Class Preparation	None
Teacher Involvement During Class 	<ul style="list-style-type: none"> • Assist in behavior management of students. • Act as one of the flowers during the 'busy bee' activity. • Read Bonita Broccoli story to students.
Post-Class Teacher Responsibilities	<ul style="list-style-type: none"> • Work with students to finish Thank you note homework assignment. • Serve healthy snack: broccoli snack if time runs short in class. • Write students' names on CHANGE certificates before the last class
Vocabulary	<p>Pollinator - anything that moves pollen from one flower to another.</p> <p>Pollen – fine powder-like grains used to fertilize flowers.</p>
Critical Thinking Activity	Creating Fruit and Vegetable Advertisements
Supplementary Activities	<ul style="list-style-type: none"> • Show video: "Private Life of Plants – The Birds and the Bees." BBC video series, part 5. • Student Assessment
Web Resources	<ul style="list-style-type: none"> • PBS Kids Media Awareness Guide: http://pbskids.org/dontbuyit/parentsguide.html • List of edible flowers: http://www.ext.colostate.edu/Pubs/Garden/07237.html • Cautionary rules for eating flowers: http://www.ipm.iastate.edu/ipm/hortnews/1995/7-21-1995/eatflow.html
Suggested Books for Reading in the Classroom	<ul style="list-style-type: none"> • Heller, Ruth. <u>Reasons for a Flower</u>. Penguin Putnam Young Reader. • Lobb, Janice, <u>Dig and Sow, How Do Plants Grow</u>. Kingfisher, 2000.

Flowers and Advertising: Hey Bee! Look at Me!

EALR & GLE Alignment

EALR	GLE	Lesson Applications
<p>Science</p> <p>1.1 Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things</p> <p>1.2 Understand how components, structures, organizations, and interconnections describe systems</p>	<p>1.1.1 Understand simple properties of common natural and manufactured materials and objects</p> <p>1.2.1 Understand that things are made of parts that go together</p>	<ul style="list-style-type: none"> • Function of Flowers • Incorporating All Concepts: dissect broccoli florets
<p>Health and Fitness</p> <p>2.2 Understand the concept of control and prevention of disease</p> <p>3.3 Use social skills to promote health and safety in a variety of situations</p>	<p>2.2.1 Identify and demonstrate skills that prevent and reduce the risk of contracting and transmitting communicable diseases</p> <p>3.3.1.a Express emotions constructively and form safe and respectful relationships</p>	<ul style="list-style-type: none"> • Incorporating All Concepts: hand washing • Flowers: Clever Advertisers: analyzing advertisements
<p>Communication</p> <p>1.1 Focus attention</p> <p>1.2 Listen and observe to gain and interpret information</p> <p>3.1 Use language to interact responsibly and effectively with others</p> <p>3.2 Work cooperatively as a member of a group</p>	<p>*GLE not available at this time</p>	<ul style="list-style-type: none"> • Function of Flowers • Flowers: Clever Advertisers • Incorporating All Concepts: Fruit and Vegetable Ads • Function of Flowers: Busy Bee
<p>Reading</p> <p>3.1 Read to learn new information</p>	<p>3.1.1 Understand how to select and use appropriate resources</p>	<ul style="list-style-type: none"> • Incorporating All Concepts: Analyzing Advertisements and Bonita Broccoli Story •
<p>Writing</p> <p>1.2 Use style appropriate to the audience and purpose.</p>	<p>*GLE not available at this time</p>	<ul style="list-style-type: none"> • Thank you Notes

Flowers and Advertising: Hey Bee! Look at Me!

Preparation Outline

Activity Supplies

⊗ *Items marked with this symbol may not be purchased using FSNE funding, nor included as part of cost share.*

Functions of Flowers

⊗ 2 Pretty sweet-smelling flowers. If not available, make a colorful construction paper flower.

Busy Bee Activity

- 1 piece of paper with 2 busy bees. Paper is folded in half and stapled with a ⊗ cotton swab in the middle.

Advertisement Activity

- 3-5 magazine advertisements (select food-related ads that are colorful and directed towards kids or families)

Broccoli Dissection and Healthy Snack

- 1 head of broccoli cut into small florets (1-2 florets per student)
- Magnifying glasses (1 per student)
- Use sprouting broccoli flowers from garden if available
- Small paper plates (1 per student)

Thank You Notes

- Names of people or organizations that have donated supplies

Review

- Classroom Tasting Challenge checklist
- Healthy Person Contract
- Vitamin A pictures for Healthy Person Contract

Overheads	<ul style="list-style-type: none"> • Flower Diagram • Bonita Broccoli Story
Student Handouts	None
Teacher Handouts	<ul style="list-style-type: none"> • Certificates for teachers to fill out before next lesson • Student Assessment and Answer Key
Changes for K and ELL Classes	None
Rainy Day Activity Supplies	None

Flowers and Advertising: Hey Bee! Look at Me!

Outline

Function of Flowers (15 Min)

- **Plant Part Review**
- **Discuss Flower Diagram Information**
- **Explanation of Pollen and Pollinators**

- **Busy Bee Activity (5 Min)**



Content

Today we will learn about another part of the plant: flowers. We will also learn about flowers' friends: pollinators.

- Draw a picture of a plant on the overhead, and label all the parts, focusing on the flower.
- Show an example of the flower (hold up the prop). Explain that some of the vegetables we eat are flowers, and ask the students if they can think of any (broccoli, cauliflower, artichoke).
- Discuss the parts and functions of a flower: Display overhead of flower diagram, and draw in the pollen in a colored marker to show where it is and how it must travel. Sketch in a bee, visiting the flower and collecting pollen on its legs (or use a model of a bee).
- Flowers make seeds that will grow into a new plant. But they can't do it alone. They need help. They need to get pollen from another plant, and they cannot walk over to another plant to ask for it. Have you ever seen a flower walking around? No! Plants get help from **pollinators**.
- A pollinator is anything that moves pollen from one flower to another.
- Bees are pollinators. They go from flower to flower to get food (nectar). When they visit the flower, they get pollen on their legs and then when they go to another flower some of the pollen on their legs gets left on the new flower. Plants depend on pollinators to spread pollen so they can make seeds. Plants use the flowers to get the pollinators' attention. They have many ways to get attention:
- **Ask:** How do flowers attract pollinators? (write on board)
 - 1) Bright colors
 - 2) Aromatic nectar (Nectar is food that smells good to pollinators)
 - 3) Shape of flower that is designed for certain type of pollinator (audience)
 - 4) Lightweight fluffy flowers for wind pollination
- Bees are not the only pollinators. Can you think of other pollinators? (make a list on the board: birds, bats, bees, bugs, wind and even people)
- **Busy Bee Activity:** Describe the Busy Bee activity and act it out with the teacher. Each of you hold a flower in hand, ask two students to volunteer to be

“Busy Bees”. Two students will come up and use a busy bee on a cotton swab to visit each flower, brushing the cotton swab into the petals of the flower in order to get the pollen. Explain to the class that they are the bees picking up pollen. Upon each child’s visit to the flowers say “thank you for the pollen.”

Flowers: Clever Advertisers (10 Min)

- **Defining Advertising**

- Flowers are clever advertisers! They want the bees to come to them, so they offer many things in order to get attention (bright colors, smell good, pretty shapes). In this way, we can say that they are advertising.
- What is advertising? Have you ever been walking in the mall and smelled cinnamon rolls baking? That smell makes you want to have one! And you can walk over to the cinnamon rolls, but you can’t just have one; you have to give them something – your money. Just like the bees end up giving the flower some pollen, in order to get the nectar, you have to give money in order to have the cinnamon roll. The good smell of the cinnamon roll is an advertisement, getting your attention so that you will come over and give some money.
- Give examples of advertisements: Billboards, television and radio commercials, free samples, magazine ads, etc.
- Companies use advertisements to promote products in order to get your money.

- **Understanding and Analyzing Food Advertisements**



- **Introduce Food Advertisements:** Gather several catchy, bright, magazine advertisements that are aimed at kids. Use ads as quick flash cards and show around room, asking students to raise their hands to let you know the first thing that caught their attention in each ad (bright colors, pictures of toys/prizes, celebrities, etc.)
- Help them make the link: *How are advertisers like flowers?*
- Mention that most advertisements are for foods that are not healthy fruits and vegetables, yet fruits and vegetables are so good for our bodies.
- Ask if they think that they could make colorful pictures of fruits and vegetables that would get people’s attention.

Incorporate all Concepts (20-25 Min)

- **Fruit and Vegetable Advertisements**

- Explain to students that they are going to color pictures of fruits and vegetables as “advertisements” to get people’s attention. They can choose to advertise any fruits and vegetables they like.
- **For 3rd graders, if appropriate:** have students include

- **Wash Hands**
- **Bonita Broccoli Story**
- **Dissect Broccoli Florets (8 Min)**



information about the nutrients in fruits and vegetables (Example: “vitamins, fiber, help your body grow strong and to stay healthy”).

- Students take turns washing hands as they finish coloring.
- As students are washing hands, teacher reads Bonita Broccoli with them.
- When all hands are washed, distribute broccoli florets, paper plates and magnifying glasses. Show students how to use a magnifying glass, and how to open a bud with their fingernails. Ask students to find the tiny flowers inside buds. Ask them to raise their hand if they can find and tell the color of the flowers.

NUTRITION LINK

Broccoli flowers, stems and leaves are very good for us. They are very high in Vitamin C, which helps heal our cuts. They also have plenty of Vitamin A. Vitamin A helps keep our vision strong, especially night vision. Like all other plant parts they also have some fiber that keeps our insides scrubbed clean.

- **Eat Healthy Snack**

- Enjoy snack of broccoli florets.

Thank You Notes (10 Min)

⊗ *This activity may not be conducted by FSNE funded staff, and may not count toward FSNE cost-share time.*



- People have donated food and materials for gardening and cooking in our class, and we want to thank them.
- Have students write a thank you note to those who have donated materials for gardening and cooking in class. The note should include a sentence about what they have learned, and a drawing of their garden or fruits and vegetables they have eaten in class.

Review and Reflection

- **Bonita Broccoli**
- **Classroom Tasting Challenge**
- **Healthy Person Contract: Vitamin A**

- **Bonita Broccoli Review:** Ask students the review questions from the Bonita Broccoli story.
- **Classroom Tasting Challenge:** After tasting the Broccoli florets, ask students to raise their hands to show you how many tasted, liked or did not like the snack. Record the number of students who raise their hands in the appropriate column on your Classroom Tasting Challenge checklist, out of the total number of students in class that day.
- **Healthy Person Contract: Vitamin A.** Hang Healthy Person Contract and ask class what vegetable they ate today that is high in Vitamin A? (broccoli). How does Vitamin A help our body? Helps us _____ (see in the dark). Draw 2 eyes on the person and select a person to tape a carrot on each of the eyes.

Lesson Materials

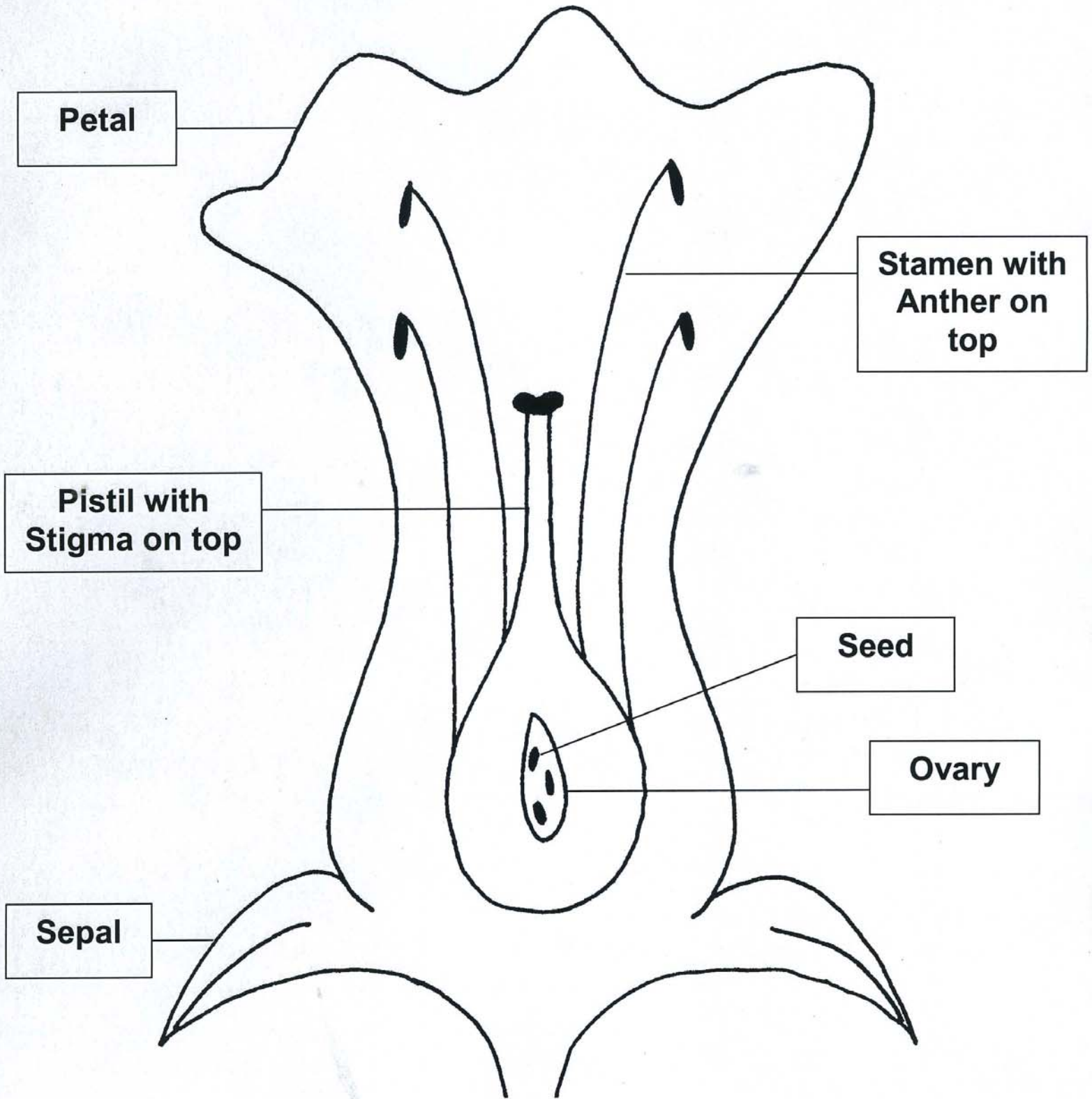
Flowers and Advertising: Hey Bee! Look at Me!

- **Flower Diagram**
- **Busy Bee**
- **Bonita Broccoli Story**
- **CHANGE Certificate**

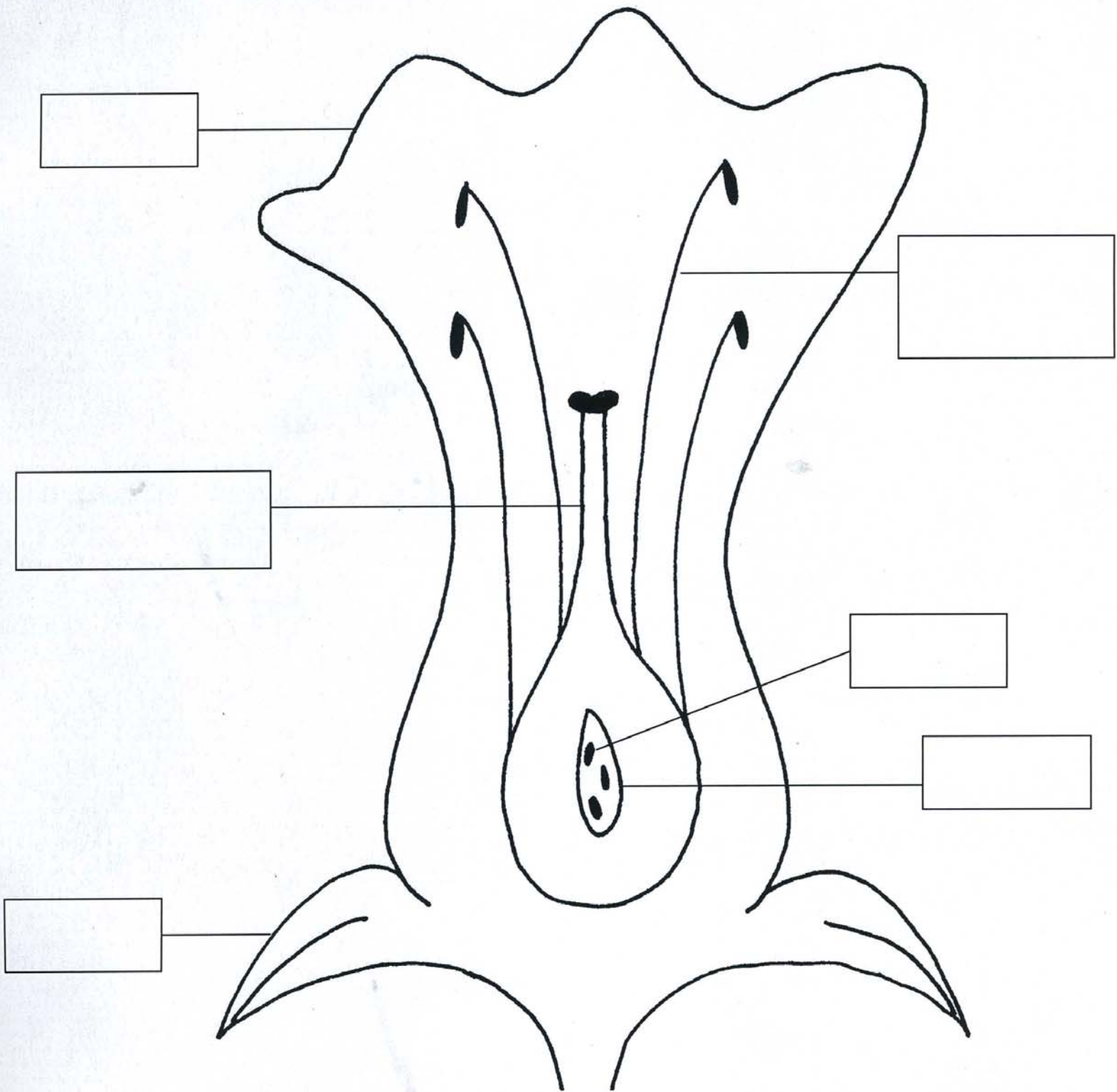
Supplementary Activities

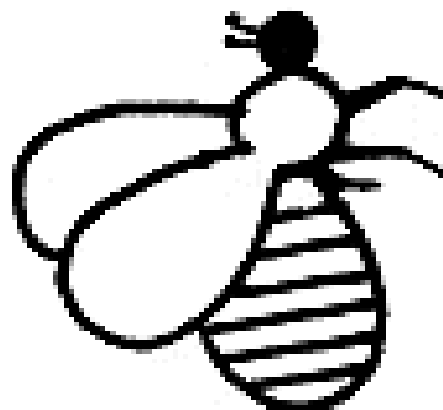
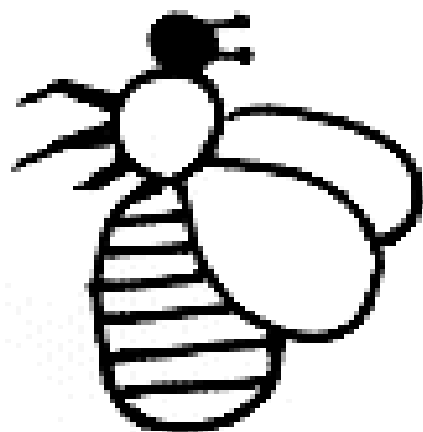
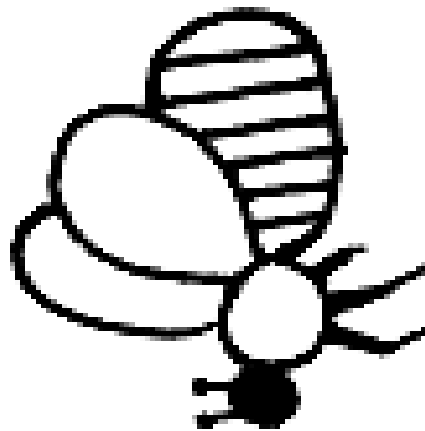
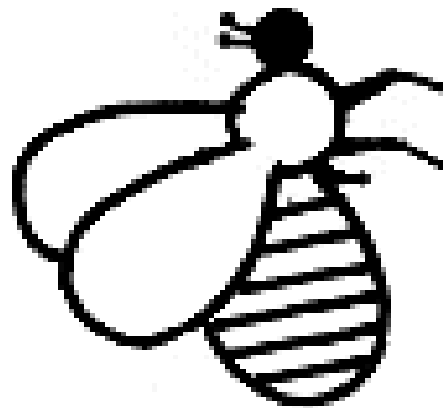
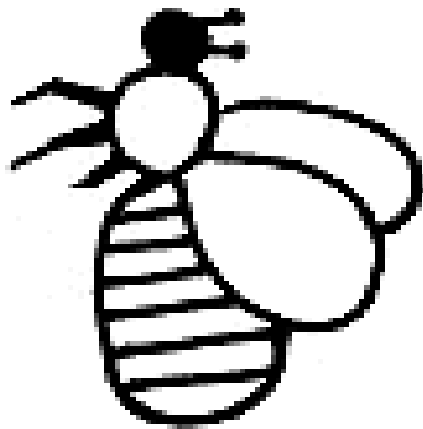
- **Student Assessment: Grade 1**
- **Assessment Key**
- **Student Assessment: Grades 2-3**
- **Assessment Key**

Flower Diagram



Flower Diagram







Hello boys and girls, my name is ***Bonita Broccoli*** and I've come here all the way from Italy! My cousins are kale, cabbage and cauliflower. As you can see, I am dark green and have a big head. My head is a bunch of flowers that grow tightly together. You need my flowery head to make seeds for more broccoli plants.

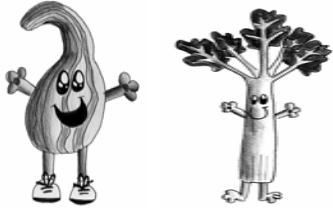
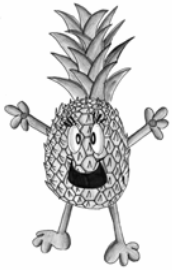
I am a tough gal, and I love to grow all year round in the Pacific Northwest. Plant me in the summer, spring, fall or even winter and I'll pop my giant flower head out of the ground anytime, full of energy and nutrients.

My head is big because I am packed full of Vitamin C and fiber. My vitamin C can help keep your skin healthy. Also, my fiber is like a cleaning brush in your body because it scrubs your insides.

You can boil me, steam me, put me in a dip or even just eat me raw. Add me to your salad or favorite dish to make your meal even more yummy and colorful.

Questions for review:

1. Describe what broccoli looks like.
2. During what season(s) does broccoli grow best?
3. Why is broccoli good for us?
4. What are some ways to eat broccoli?



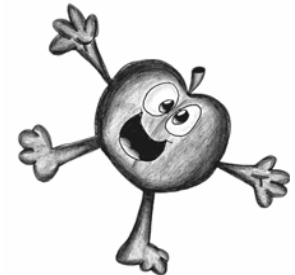
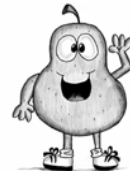
CERTIFICATE

Awarded to

**Certificate of Completion of the CHANGE Program -
Cultivating Health And Nutrition through Gardening
Education**



Presented by
**Washington State University Extension
King County**



Hey Bee! Look at Me!

Name: _____ Date: _____

Draw three ways flowers attract pollinators.

--	--	--

Hey Bee! Look at Me!

Name: _____ Date: _____

Draw three ways flowers attract pollinators.

Any three: bright color, nice scent, shape of flower/petal like that of pollinator, lightweight/fluffy flowers		
--	--	--

Hey Bee! Look at Me!

Name: _____ Date: _____

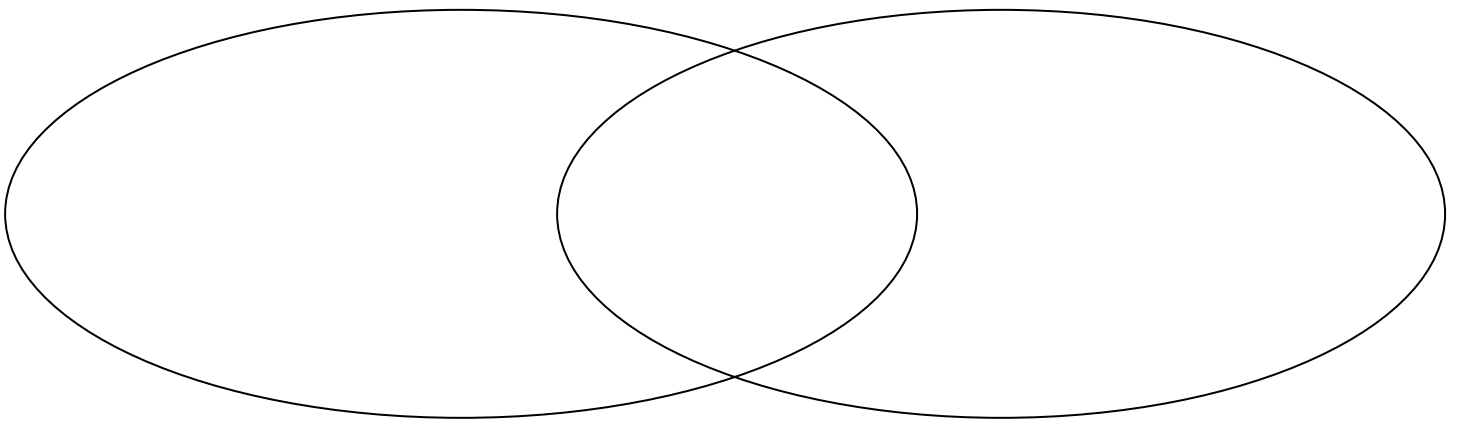
List three ways flowers attract pollinators.

1. _____

2. _____

3. _____

**Using the Venn Diagram show how
flowers and advertisers attract attention:**



Flowers

Advertisers

Hey Bee! Look at Me!

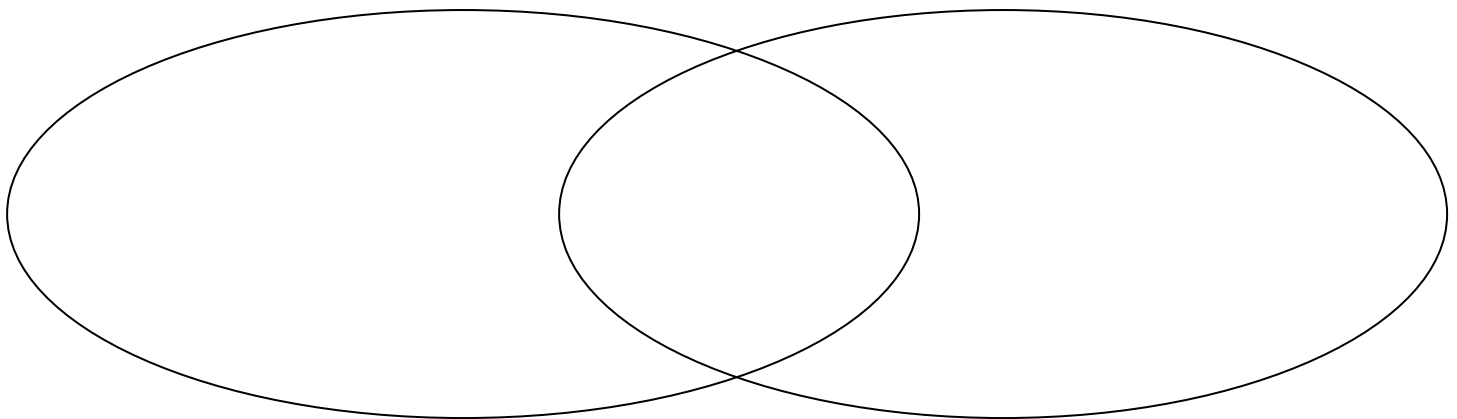
Name: _____ Date: _____

List three ways flowers attract pollinators.

Any three: bright color, nice scent, shape of flower/petal like that of pollinator, lightweight/fluffy flowers

Using the Venn Diagram show how
flowers and advertisers attract attention:

Examples: flowers and advertisers use bright colors and smells, flowers use shapes and textures that attract pollinators, advertisers use billboards, television commercials, free samples, magazine ads to attract customers



Flowers

Advertisers