



Hawaii's Forest

Concepts

Roles of Pollinators
Roles of Flowers
Importance of
Pollination

HCPS III Benchmarks

SC.4.1.1
SC.4.5.2

Duration

Part 1: 1 Hour
Part 2: 45 Min.
Part 3: 50 Min.

Source Material

PRISM

Vocabulary

Adaptation
Fertilize
Flower
Fruit
Pollinator
Pollen
Seed

Flower Frenzy

Summary

Students will learn the anatomy of a flower by observing flower specimens and building a diagram.

Objectives

- Students will be able to explain the process of pollination and the role pollinators' play the life cycle of a plant.
- Students will be able to identify the parts of a flower and the parts that are involved in pollination.
- Student will be able to hypothesize whether particular flowers are insect or bird pollinated.

Materials

Flower Part Smarts Activity (Part 1)

Scissors (1 per student)
Construction paper (red, yellow, orange, green: three of each color per group of 5 students or less)
White 8 ½" X 11 Paper or Cardstock
Glue (1 bottle/stick per student)
Black pens (1 per student)
Sticky Velcro (1 Roll)
Teacher Flower Part Smarts Puzzle, Pg. 14 (1 large copy as an example)
Flower Part Smarts Template, Pg. 15
Flower Part Smarts Completed Diagram, Pg. 16 (Teacher use)

Pollination Introduction (Part 2)

Pollen in small container (small plastic clear container with lid)
Pollination in Action PowerPoint/Computer/Projector (or color print slideshow)
Bird Pollinated Lobelia Diagram, Pg. 12 (1 printed on transparency)
From Flowers to Fruits and Seeds Diagram, Pg. 13 (1 printed on transparency)
Life Cycle of a Flower Worksheet, Pg. 17 (1 per student)
Flowers, Birds, Insects, and Wind Activity, Pgs. 18-20 (1 set per student, see prep)
Fancy Flowers and Busy Pollinators Diagram, Pg. 21 (1 per student)
Hibiscus Flowers (1 per student pair)

Flower Pressings Activity (Part 3)

Teacher Pollination Informational Sheet
Paint Brush (1 per student pair or per student)
Thick Rubber bands (2 per student pair)
Cardboard 5"X5" pieces (2 pieces per student)



Plastic Cups to mix glue wash (1 per student pair)
Flowers (See Teacher Prep)
Newspaper (5"x5" pieces) (4 sheets per student pair)
Cardstock (Greeting Cards: 1 sheet 2 stud.)

Making Connections

Students have been exposed to flowers previously in one way or another, weather seeing Mom getting flowers on Valentine's Day, flowers growing in their yard, or making or receiving a lei on May day. Beyond beauty and thoughtful gestures what is the purpose of flowers in nature? We love to look at flowers, enjoy their sweet scent, and place them about our homes. Flowers are not always colorful and showy. They come in many shapes, colors, some with sweet scents, some that don't. If you have time, take students to a nearby garden or around your school's campus to see what kind of flowers you can find!

Teacher Prep for Activity

Flower Parts Smarts Activity Preparation (Part 1)

1. Print *Flower Part Smarts* Template onto thick cardstock (One set of the *Flower Part Smarts Template* for each group of five students). Cut the pieces out, these pieces will be templates for the students to use. Students will be working in groups for this activity. Groups should not consist of more than five students.

2. Make a materials kit for each group of 5 students.

*Note: You may use different colored paper than the colors specified below. The different colors will be used to construct a flower diagram. Using the colors below will produce a diagram that will look exactly like the *Teacher Flower Part Smarts Diagram*. This will be easier for students to follow instructions, as they can match the colors of their flower parts with the colors of the diagram.

Kit Contents:

- a. 3 sheets green construction paper
- b. 5 sheets purple construction paper
- c. 1 sheet yellow construction paper
- d. $\frac{1}{4}$ sheet orange construction paper
- e. $\frac{1}{4}$ sheet red construction paper
- f. $\frac{1}{2}$ sheet lavender construction paper
- g. $\frac{1}{4}$ sheet pink construction paper
- h. 5 - 8 $\frac{1}{2}$ X 11" white construction paper
- i. 5 Glue/Glue Stick
- j. 5 Ballpoint pens
- k. 5 Rulers
- l. 5 Scissors

Hint: If you have time, cutting out pieces for students and making kits will save time in the classroom.



3. Print *Completed Flower Part Smarts Diagram* on transparency.
4. Color print *Teacher Flower Part Smarts Diagram* on card stock (print larger than 8 ½ X 11” if possible, you will use this diagram to help students put together their diagram) Laminate. Assemble your puzzle ahead of time using *Completed Flower Part Smarts Diagram* to help you. Place sticky Velcro OR tape on the pieces so when assembling for your class you can stick pieces together and take them apart again.

Pollination Introduction Preparation (Part 2)

1. Set up computer with projector to show prepared slideshow (included in curriculum). Alternate Option: Print out the slide show slides or bring in books with photos of flowers being pollinated.
2. Print *From Flowers to Fruits and Seeds Diagram* and *Bird Pollinated Lobelia* diagrams on transparency. Set up projector and screen in classroom.
3. Print *Flowers Birds, Wind, and Insects Activity Sheet* (1 per student) Note: Pages 18 and 19 should be printed double sided so that the riddles that correspond to each photo matches up. Print page 20 (All pages make one activity packet). Print *The Life Cycle of a Flower* (1 per student).
4. Collect hibiscus flowers. These flowers bloom year-round and can commonly be found in landscaping. Collect one flower per each student pair. Hint: If possible collect these the morning of the lesson, if this is not possible, place collected flowers in refrigerator. Test to see if flowers will still be usable by placing some in the refrigerator several days prior to the lesson. This will give you time in case they wilt and you need to collect more.
5. In small clear container collect pollen. Pollen can be taken from the anthers of any flower (see *Flower Part Smarts Completed Diagram*, Pg. 16) Pollen is a fine powdery substance that can be found on mature flowers, usually at the end of long appendages that come out of the center of the flower.

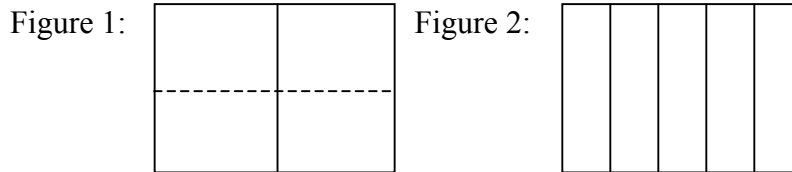
Flower Pressing Activity Preparation (Part 3)

1. Cut 5 X 5 inch pieces of cardboard (2 per student pair)
2. Cut 5 X 5 inch pieces of newspaper (4 per student)
3. Collect enough flowers to be used to decorate either a bookmark or greeting card (flowers used in Pollination Introduction can be used). Try to choose flowers that are thin but not too fragile, flowers should be able to be pressed flat. Almost any flower can be pressed, some press better than others, and some take longer to press than others, it all depends on the flower.

<i>Flowers that will work</i>	<i>Flowers that won't work</i>
Flowers that are thin and can be pressed flat.	Fleshy – too much moisture
Flowers that are flexible and can be easily pressed flat. Examples: (Not limited to) Hydrangeas, hibiscus petals, Ilima.	Thick flowers – too thick to press, where flowers are sturdy and cannot be pressed flat, for example Antheriums or Woodrose flowers.



4. You may choose to decorate either greeting cards or bookmarks. If you choose to make greeting cards see figure 1. Cut cardstock sheets in half along the solid line. The two pieces can then be folded in half along the dotted lines to form greeting cards. If you choose to make bookmarks see figure 2. Cut cardstock pieces into 5 strips.



Background

A flower is a set of specialized structures each with the goal of reproduction. The colors, shapes and fragrances of a flower are all part of the lure for pollinators. It's a two-way win relationship; pollinators get a food source, and flowers get pollinated. Pollination happens when pollen is moved from the anther to the stigma unintentionally. Pollinators in Hawai'i are usually insects and birds. When pollinating their intention is usually not pollination but instead the reward. Flowers produce sugary nectar that draws in pollinators. This sugary nectar costs the plant energy to produce. Give it up for free? Not usually. When an insect or bird visits a flower it moves in and about to retrieve it, while doing so pollen is rubbed or shaken off of the flowers' anther and sticks to the pollinator. Once the pollinator removes its sugary reward it moves to another flower. While visiting, the pollen stuck to it from the last flower may rub or shake off. Pollen that falls onto or sticks to the stigma of the new flower will move down the style, the tube that connects the stigma to the ovaries. Wind pollinated plants have flowers that are inconspicuous, because they need not attract a pollinator with bright colors or patterns, sweet nectar, or scents. Instead they produce lots of pollen in hopes of some pollen grains landing on another flower of the proper part, the stigma. The pollen grain will move down the style (pollen tube) and fertilize the *ovules* within the *ovary*, and develop into a seed(s). The ovary will grow, change shape, harden, or turn fleshy. Examples of these would be fruits, a strawberry, tomato, a bean pod, and acorn, and even a grain of wheat. Hawai'i's pollinators are unique. Insects, birds, and flowers have evolved together. For example, the 'i'iwi bird has a long and narrow curved bill that fits perfectly into native mint flowers. As you would probably guess, the mint flowers are long narrow and curved as well. This is just one example of many, all of which amazing, all of which necessary. A pollinator without a food source will not survive, and a flowering plant without a pollinator cannot reproduce. View Teacher Handout *Bird Pollination* Diagram for a better understanding.

Flower Pressing: Botanists (plant scientists) press plant parts including flowers in order to preserve the specimens. These specimens are pressed between sturdy boards and sheets of paper. The sheets of paper absorb moisture from the plant specimens and the sturdy boards will press the specimens flat. These flattened specimens dry for a couple of weeks to a month. When the specimen is dried it is mounted (glued or taped permanently) to acid-free paper and is saved. Botanists will go back to these specimens and observe plants in more detail or compare them with other plants to help identify them.



Vocabulary

Adaptation: To modify become suitable for a new environment or purpose.

Fertilize: Introduction of male parts to female egg to form a new individual.

Flower: Seed bearing part of plant.

Fruit: Part of plant containing seed.

Pollen: A fine powdery substance that are made up of microscopic male pollen that can fertilize female flowers that will later become a seed.

Pollinator: Transfers pollen from one flower to another (an insect, bird, or animal)

Seed: A flowering plants reproductive unit that is capable of developing into another plant.

Procedure

Flower Part Smarts (1 Hour)

1. Introduction - Ask students, “What do we use flowers for?” [We eat them, make leis, decorate with them, and wear them in our hair, to make dye, and to give to someone special] “Where do flowers come from?” [They grow on plants.]

2. Explain. “Today we will be learning about the parts of a flower and why these flowers are important”

3. Explain, “Flowers are made up of many different parts. Just like humans have different parts such as the, legs, eyes, a nose, a mouth, etc. flowers have different parts with names as well.

4. Divide students into groups of five. Pass out one kit per group of five (see teacher procedure).

5. Hold up a *Complete Flower Part Smarts Diagram* to give students an idea of what they are making. Explain, “Today we will begin by learning the different parts of a flower.”

6. Instruct students to trace the *Flower Part Smarts Templates* onto the correct colored paper and cut the pieces out making sure that each student keeps track of their pieces. Each flower part listed in the block below has a number(s) associated with it. These numbers refer to the numbers that label the corresponding flower parts in *Flower Part Smarts Template*. These numbers are to help you instruct students as to which flower parts (which shape) to trace on which color paper. For example, “Trace the templates that are numbered 1, 2, and 3 onto purple paper.” “Next, Trace the templates numbered 4 and 5 onto yellow paper.” Etc.

Note: Cutting out puzzle pieces for students ahead of time will save time in the classroom, as many of the little pieces may be difficult to cut out.

Hint: Instead of cutting out pieces # 8, 9, and 10 use a single hole puncher to punch out these pieces.



Color corresponding flower parts:

- a. Purple – Petals (# 1, 2, and 3)
- b. Yellow – Stamens (# 4 and 5)
- c. Orange – Anthers (# 6 and 7)
- d. Red – Ovules (# 8, 9, and 10)
- e. Lavender – Stigma/Style (#11)
- f. Pink – Ovary (#12)
- g. Green – Sepal/Peduncle (#13)

7. Have students assemble flower parts to complete flower diagram. Use *Teacher Flower Part Smarts Puzzle*. Draw a square on the board (like a upright sheet of paper) in the “sheet of paper” put your puzzle together piece by piece (using Velcro or tape, in the order you would if you gluing the pieces down onto an actual piece of paper). This way the students can put their puzzles together piece by piece as a class. Instruct students to glue down pieces on to the white sheet of paper one by one as you put together each piece of the puzzle in front of the class.

8. Instruct students to draw 6-10 little dots on each anther of their diagram with their black ballpoint pens. This will represent the pollen of the flower.

9. With your completed puzzle (diagram) on the board, label the parts of the flower within the lines of the drawn “piece of paper.” Then, draw a line from that part to the white piece of the paper. Label the parts on the board by drawing lines from each part and writing the name of each part at the end of the line. Have students draw a line from each part to the edge of the paper with a ruler and write the correct name on that line for each part as you go over each name.

10. Explain the flower parts: Pass out 1 Hibiscus flower per student pair. Go over each name for the different parts of the flower using the *Complete Flower Part Smarts Diagram* while pointing to the corresponding parts of the Hibiscus flower. Allow each student pair to dissect their flower gently to see its inner parts and try to identify each part using their diagrams. Explain that each part of the flower is important and will be discussed later in the lesson. (This step is to simply get students acquainted with the parts of a flower and see an actual example.)

Note: Some parts of the diagram may be hard to identify in the actual specimen as they may be too small or may not look similar to the shapes of the diagram – some of the shapes are representations of the actual flower parts.

11. Explain. “Many plants can be identified by their flower parts, thus, knowing the different parts helps scientists to determine one plant from another.”

12. Explain, “Every part of a flower has a purpose just like every part of your body, these parts are mainly for reproduction.” Write the definition of reproduction on the board.



Reproduction: *The combination of male and female parts to produce offspring (babies/young).*

13. Explain, “In the next section we will learn about pollination and what flower parts are involved in this process.”

Pollination Introduction (45 Minutes)

Note: When talking about particular parts of the flower (in this section) have students point to the flower parts you are referring to. This will help reinforce the different parts and help student to make connections between the parts and their functions.

1. Explain, “Now that we know the parts of a flower, lets discuss why flowers exist. Ask “Why do you think plants have flowers?” discuss.

2. **Explain that flowers are for reproduction:** Introduce/reintroduce the following vocabulary.

Reproduction: *The combination of male and female parts to produce offspring (babies/young).*

Explain: In flowers, pollen is combined with ovules

Pollen: *A fine powdery substance that is made up of microscopic male gametes that can fertilize the ovules of flowers and later become a seed.*

Explain: Pollen is found on the anthers of a flower (ask students to view diagram)

Pollinator: *An insect or bird that moves pollen from one flower to another.*

Explain: Pollen is moved from the anthers of one flower to the stigma of another (ask students to view diagram)

3. Explain, “Flowers may be used to attract pollinators to take pollen from one flower to other flowers. Flowers may attract a pollinator with patterns, different colors, nectar and even scent.”

4. **Explain Pollination:**

a. Pollinators (insects, birds, and other animals) come to flowers to sip nectar, at the same time pollen sticks to the pollinator unintentionally.

b. The pollinator then moves to another flower to sip more nectar. As the pollinator sips nectar the pollen is left behind.

c. The pollen sticks to the stigma of the flower and moves down the tube called the style.

d. At the bottom of the tube the pollen moves into the ovary of the plant and meet with the ovules (or eggs).



e. The ovules develop into fruits and seeds that grow into more plants. These new plants grow into adults and produce more flowers.

f. The cycle happens over again.

Note: A pollinator's purpose is not to transport pollen from one flower to another, but instead to sip nectar from the flower, and because of this, flowers produce nectar to attract pollinators to their flowers to transport.

5. Ask students, "Why do we like flowers, what about them do we like?" [They smell nice, they are pretty, and they are colorful] Write these answers on the board. Explain, "These are characteristics that birds and insects are attracted to as well. Ask, "Why do you think a flower would need to attract a pollinator?" [To transport its pollen to other flowers – Previously discussed]

6. Explain, "There are many different kinds of flowers and many types of pollinators." Show students PowerPoint *Pollination in Action* to give them an idea of what pollination looks like, as many have seen insects or birds at flowers before but did not know the purpose. Simply flip through the different slides allowing students to enjoy the photos.

7. Pass out diagram titled *Fancy Flowers and Buzy Pollinators*. Explain, "We will examine three ways flowers in Hawai'i are pollinated." Go over each of the three examples given in the diagram.

8. Here introduce terminology **Fruit** and **Seed**. Write the two following definitions on the board. Have students read both definitions as a class aloud.

Fruit: *Fleshy part that grows from flowers and contains seeds.*

Seed: *A unit produced by a flowering plant capable of developing into another plant.*

9. Explain that seeds are products of pollination. Ask, "Why do you think pollination is important to humans?"

Importance of Pollination to Humans: Explain, "Flowers and their pollinators are very important to humans. Fruits and seeds grow from fertilized flowers." (Show diagram *From Flowers to Fruits & Seeds*) "Plants would not exist without pollination, and if plants did not exist we would not have anything to eat: no fruits, no vegetables, no seeds, and even no meat."

Bonus Question: "Why do you think we would have no meat without pollination?" [if there was no pollination there would be no plants for animals to eat, and thus no animals for us to eat.]

10. Ask, "Why do you think pollination is important in nature?" (How is pollination important for the plants and the pollinators?)



Importance of Pollination in Nature: Explain, “Pollinators get nectar from flowers and at the same time the pollen from one flower is moved to another. This is the plants way of reproducing (producing more plants like itself)”

11. Pass out *The Life Cycle of a Flower* worksheet. Explain, “Our next activity will help us to get more familiar with pollination. ” Instruct students to color the pictures and cut them out (give students 15 minutes to do this).

12. Instruct students, to cut the worksheet in half along the dotted line, and then glue pieces in its proper order onto the squares of the half sheet. Students can determine the order of the pieces by reading the clues below the blank squares.

Homework: *Flowers Birds, Wind, and Insects* activity sheet (see Prep)

Flower Pressing Activity (50 Minutes)

*This section will need to be done in two separate units. Flowers will be pressed first and will need 2-3 weeks to dry (sometimes more depending on how much moisture is in the flowers the students are pressing and the amount of moisture in the air). Once the flowers are dry students may put together their greeting cards/bookmarks together, this will be a separate unit as the flowers in the first unit will need time to dry

Unit 1 - Pressing

1. To begin, distribute the following materials to each student pair.

- | |
|---|
| <ol style="list-style-type: none">a. Two large rubber bandsb. Two pieces of 5 X 5 inch cardboardc. Four flowers (two per student)d. 4 Pieces of 5 X 5 inch newspapere. 2 half sheets of card stock folded in half |
|---|

*You can use dried flower petals to decorate any craft project whether it be greeting cards, a collage, or a bookmark. In this lesson a greeting card is used but you may substitute any project in its place.

2. Tell students what the final product will be; perhaps hold up an example to give them an idea of what they will be making. The final product will be either a bookmark or greeting card with dried flattened flowers adorning it. (You may want to create a finished product ahead of time show as an example)

3. Have each student pair write their names on both pieces of cardboard (write names large).

4. Have students pull off the petals of their flowers gently from the base one by one.



5. Instruct students to place one piece of cardboard with their written names facing down on the table. Have each pair place one piece of newspaper down onto the cardboard.
6. Instruct students to place flower petals down onto the newspaper square. Instruct students to arrange petals so they fit onto the square without any petals overlapping or hanging off the paper's edge. Once the newspaper square is filled up instruct students to place another newspaper square onto the arranged petals and follow the process until all the petals and newspaper are used up.
7. Once all newspaper and flower materials are used up, instruct students to place the second cardboard piece over the top. Instruct students to place one thick rubber band around the stack then another rubber band over the stack crossing over the first. The rubber band will hold the flower press tightly together. Ask students to be sure their name is facing outwards so the press will not need to be taken apart later to identify it.
8. Plan Ahead: The flower pressings need time to dry, it may take 3 days to a week depending on how fleshy (how thick the flowers are) are in order for them to dry.
9. Stack flower presses on top of each other somewhere dry (not next to an open window) and out of the way. Leave to dry.
10. Check every two to three days to see if flower petals are dried. If dried petals will be flat, some may be see-through, stiff, not wet to the touch.

Unit 2 – Card/Bookmark Making

1. When flowers are thoroughly dried return each student-pair their press. Instruct students to take off the rubber bands and gently take press apart. Remind students to be gentle, the flowers are fragile now that they are dried.
 2. Pass out cardstock half-sheets (1 per student). Have students make a glue-wash. To do this mix 1 part glue with 1 part water in plastic cups. Have students position the dried flowers on the front cover of the greeting card. Instruct students to paint a thin layer of glue over the area they want to place their petals then glue petals down.
- Note:** If students are making bookmarkers to make them more durable you may want to laminate them for the students after they are dried. If doing greeting cards have students write a note for someone special on the inside and put a greeting on the front cover. If you choose to do this have students glue greeting onto card after petals have been glued down.
3. (Optional) you may want to provide glitter or other materials to enhance the greeting card, perhaps a poem about nature or an *'olelo no 'eau* (Hawaiian proverb) printed out for them to glue inside. May include following poem, a similar poem or have students write one of their own. If you are deciding to attach a poem to card, print out and cut (make sure it fits) ahead of time so students can simply paste it into the inside of their card.

I'm growing like a flower



*With all your love and care
All your hugs and kisses
Make the good times that we share*

*I'm growing like a flower
It's all because of you
So I made this card
To say "I LOVE YOU!"*

- Author Unknown

Assessments

Completed *Flower Part Smarts* Diagram

Life Cycle of a Flower Homework

Flowers, Birds, Wind, and Insects Activity Sheet

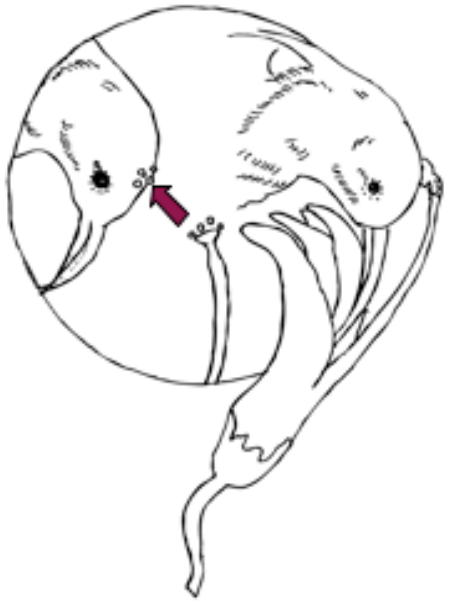
Art/Culture Connection

A lei of Knowledge: String a lei as a class. Cut out medium-sized flowers out of different colors of construction paper, one flower per student. Have each student take home their flower and research one thing that the Native Hawaiians used flowers for and write it on their flower. Have students write the name of the plant and the use. If possible string the class lei together outside and let each student discuss his/her use. Placing 2" colored straw pieces between each flower makes a nice lei. Hang the lei in your classroom for all to see.

Literature Connection

Poetry: Write a poem for flower pressing activity. Poem can be used to adorn bookmark or greeting card.

1.



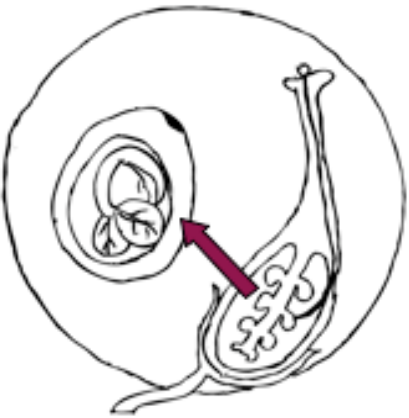
As the 'I'iwi bird sips nectar from the Lobelia flower pollen is dusted onto its head.

2.



The 'I'iwi then flies to another flower to sip more nectar. The pollen rubbed on its head from the previous flower is deposited onto the stigma of the next.

3.



The pollen grain travels down the stigma and fertilizes the ovules of the flower. These develop into seeds.

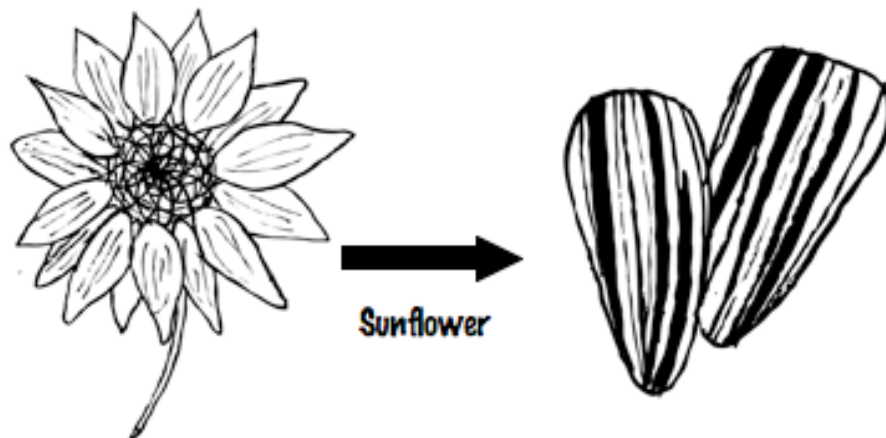
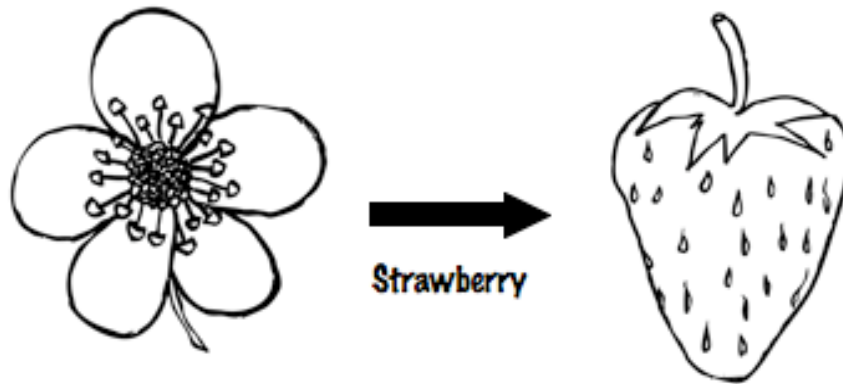
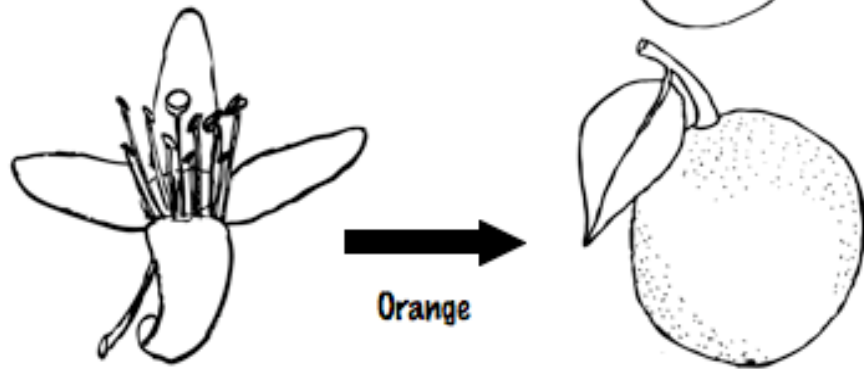
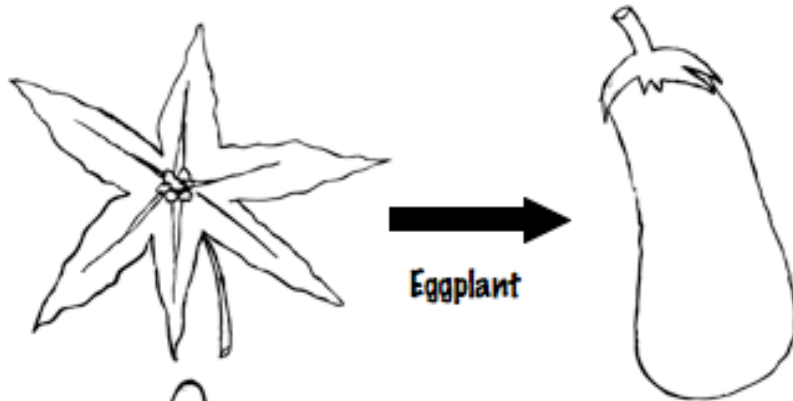
4.



The seeds mature, sprout and grow into more plants. The plant matures, produces flowers, and the cycle starts over.

The 'I'iwi and the Lobelia

From Flowers to Fruits and Seeds

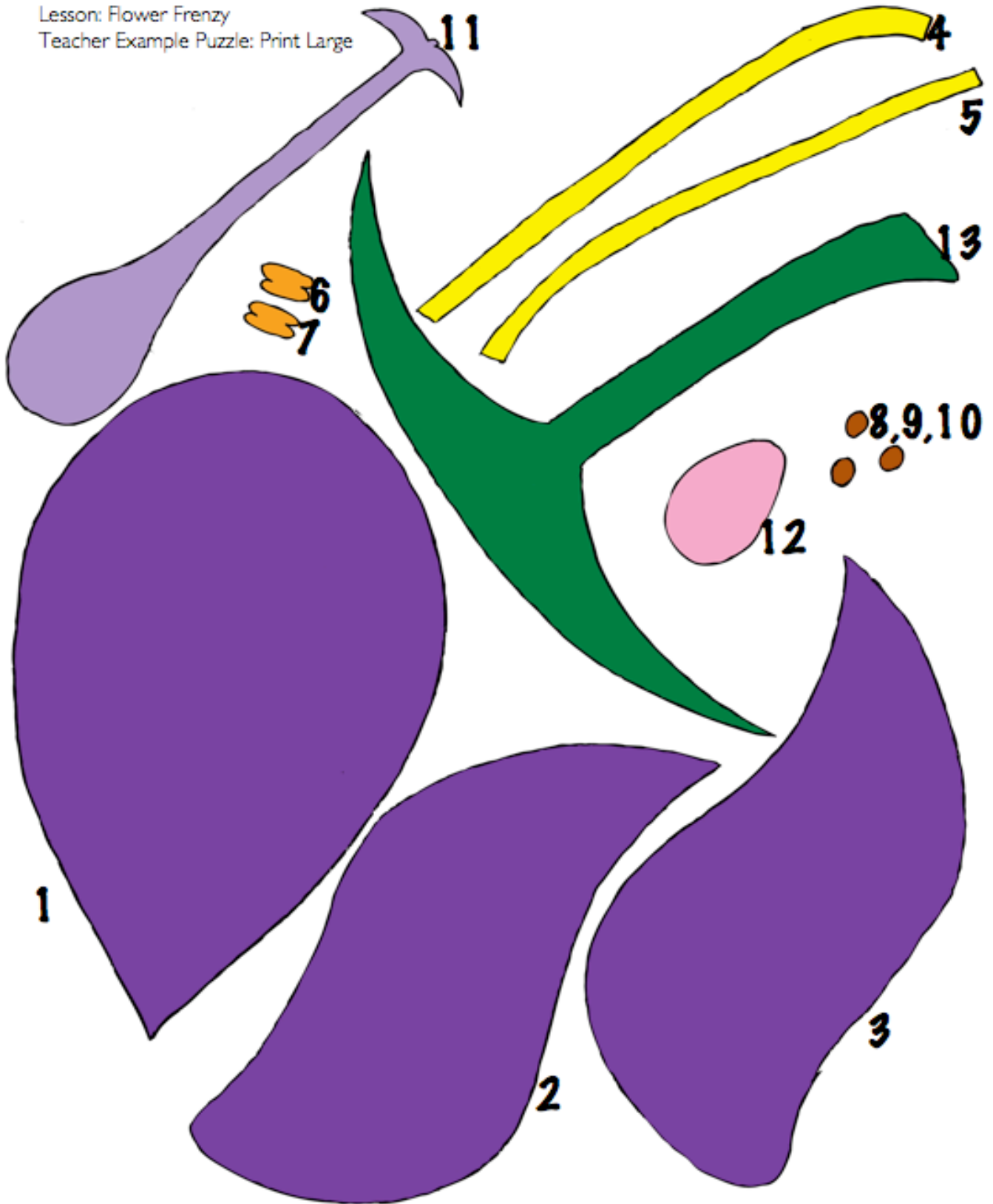




Unit: Hawaii's Forest

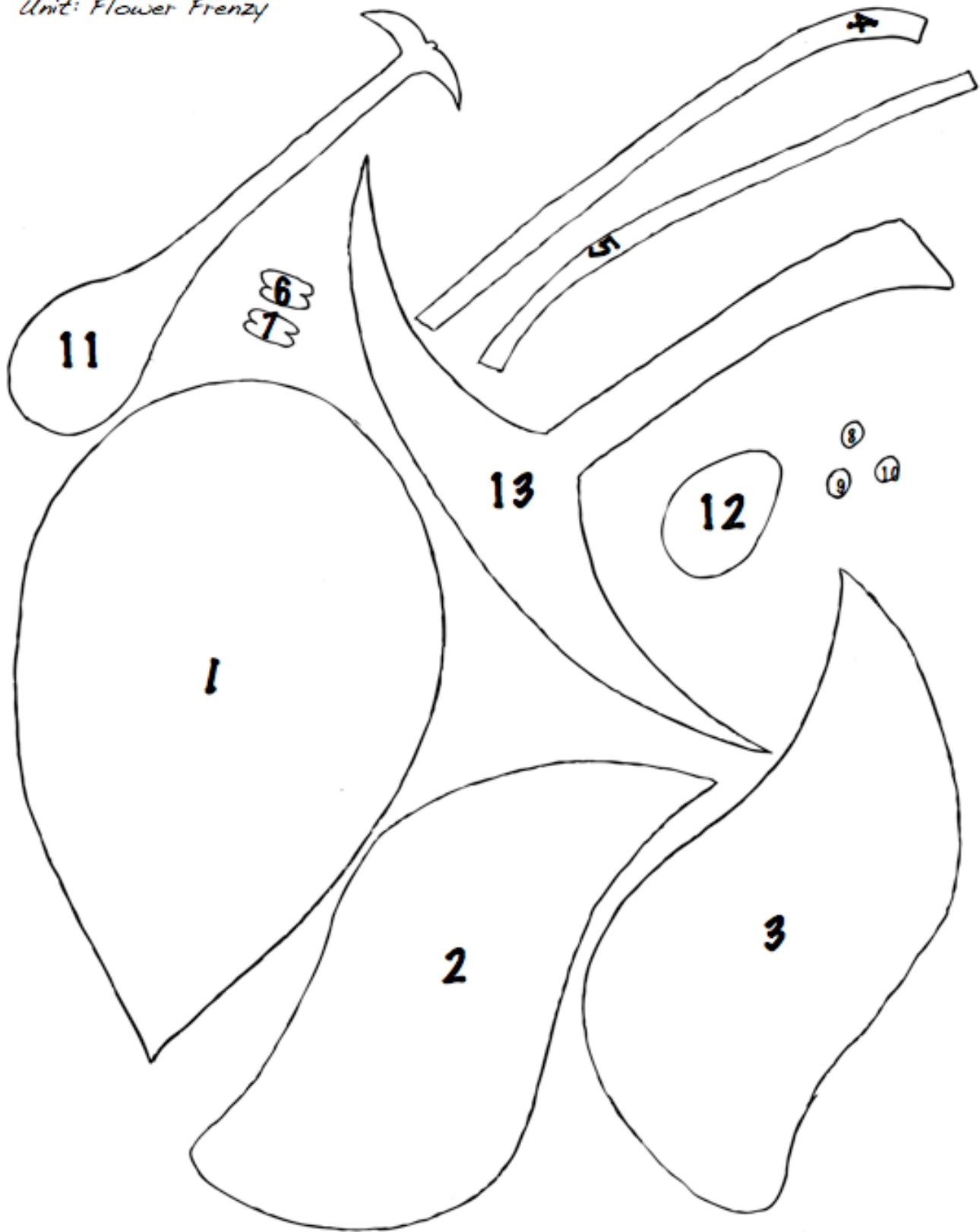
Lesson: Flower Frenzy

Teacher Example Puzzle: Print Large



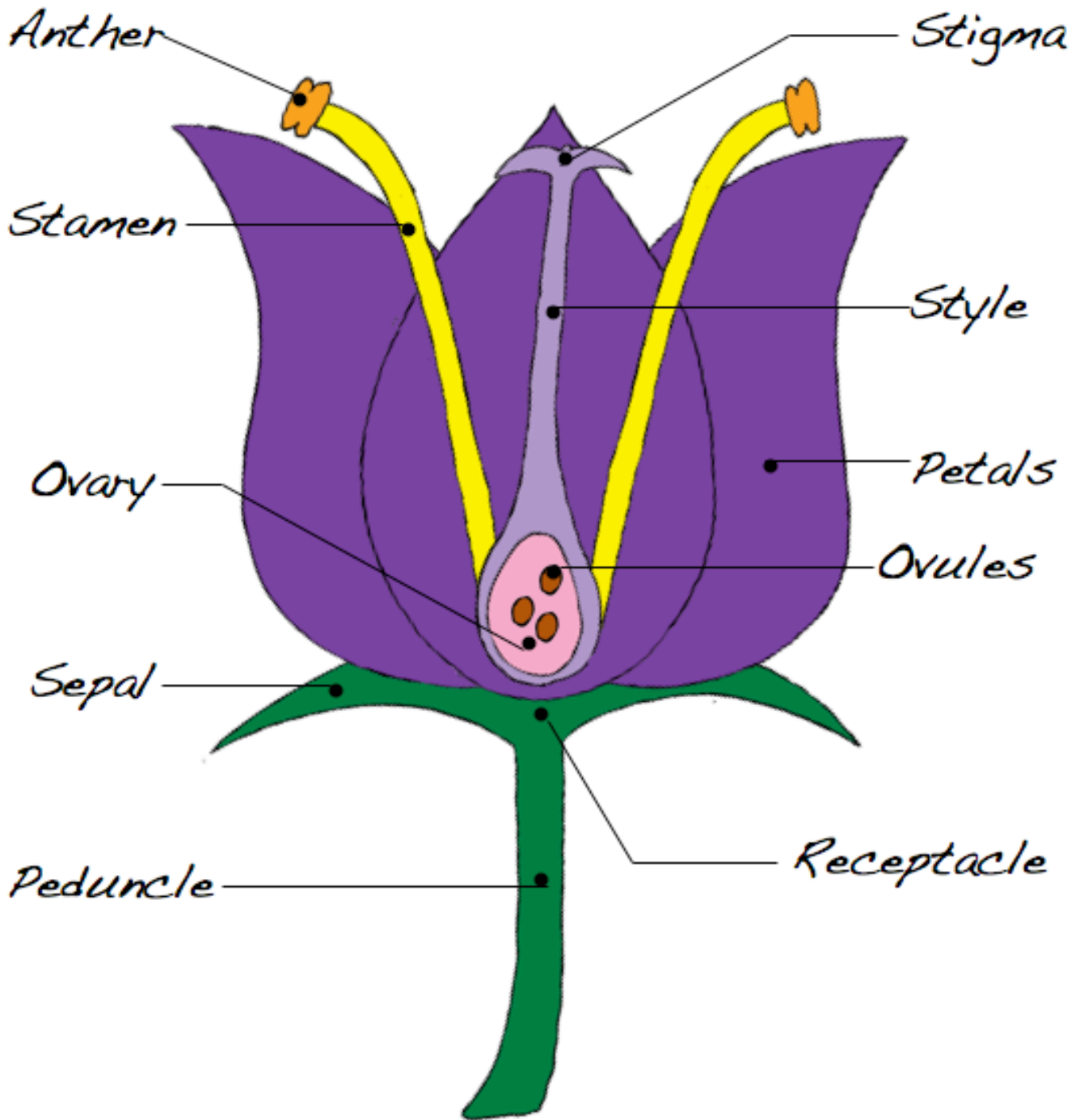


Flower Part Smarts Template
Unit: Flower Frenzy

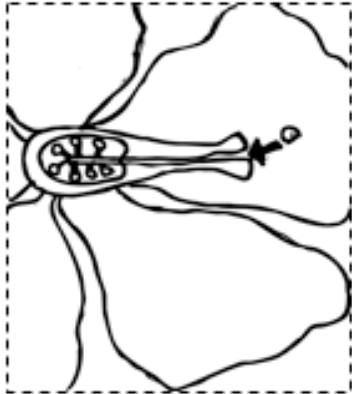


Flower Part Smarts

Completed Diagram

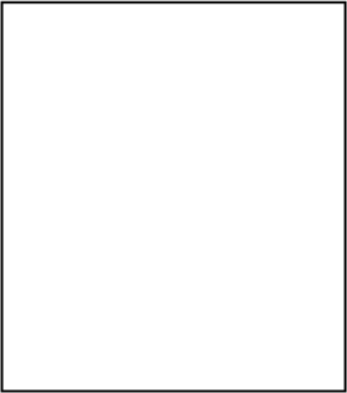


- Instructions:
1. Color and cut out the parts of the life cycle.
 2. Paste pieces in order below to complete the lifecycle using the clues below.

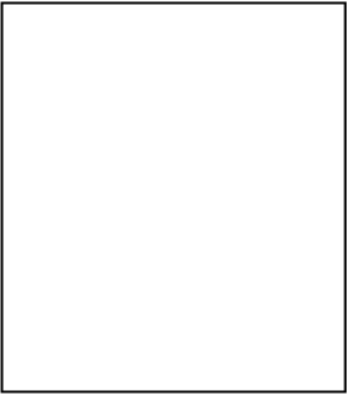


Cut along dotted line. Turn in only bottom half.

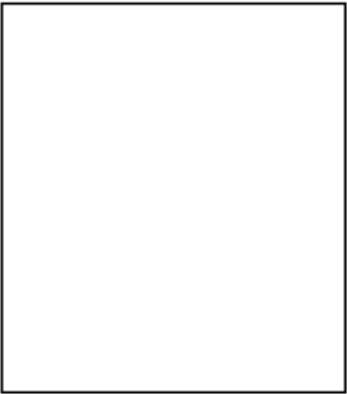
The Life Cycle of a Flower



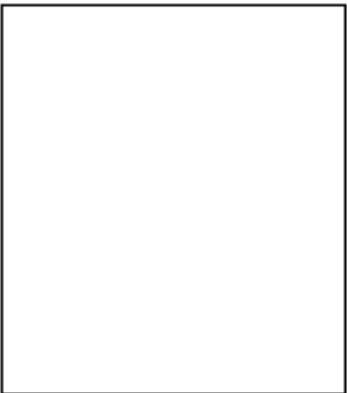
The Insect sips nectar from the flower and at the same time pollen grains stick to the insect.



The Insect then moves to another flower to sip more nectar and leaves behind pollen that fertilizes the plant.



The pollen grain fertilizes the flower. This develops into a seed.

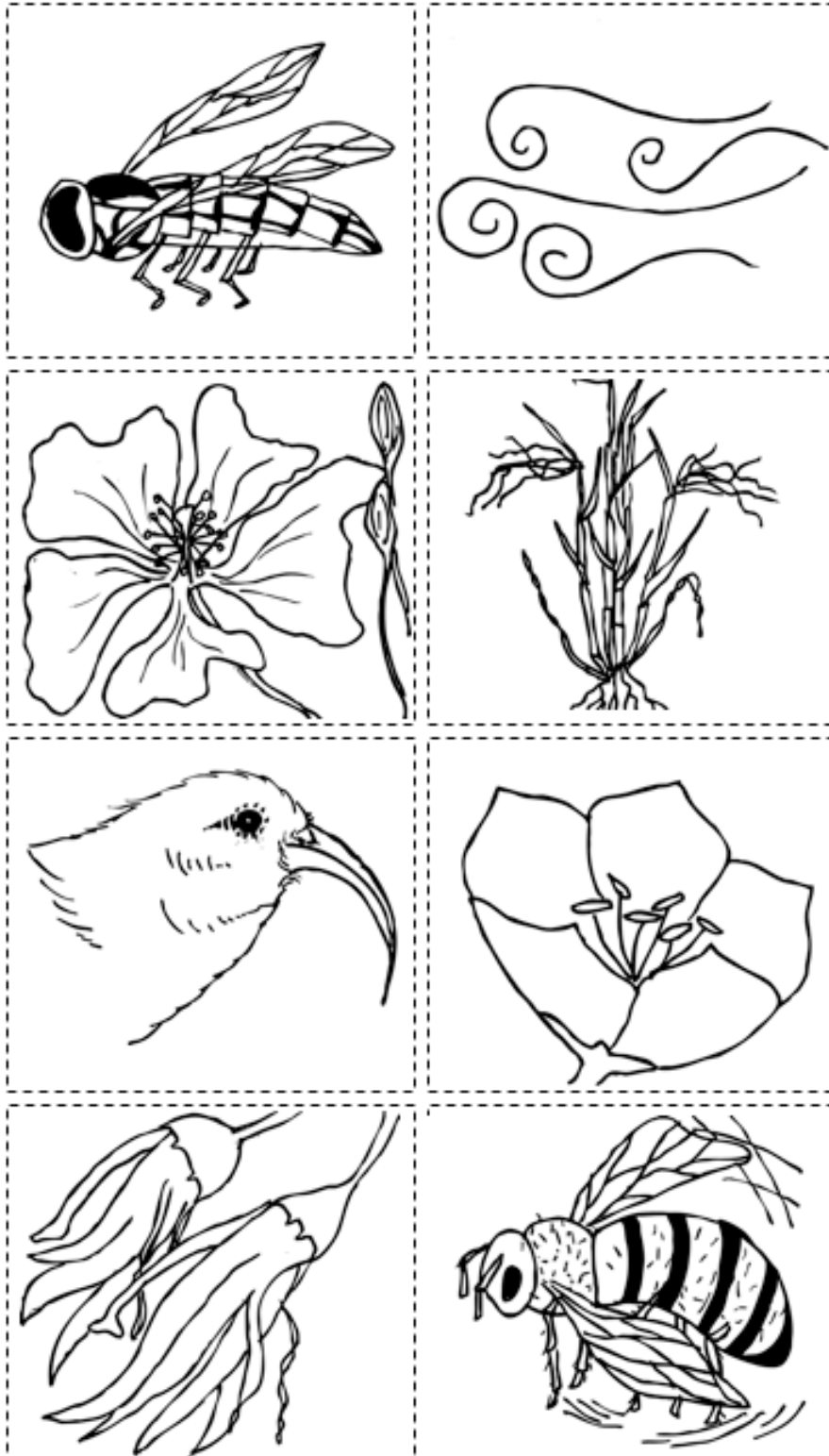


The seed sprouts into another plant which produces more flowers. The cycle starts all over again!



Flowers, Birds, Wind, and Insects Activity Sheet

Color and cut out the squares below. Solve the riddles on the back to match the correct pollinator with the correct flower.





Solve the Riddles!

I am the wind
I blow pollen small and light.
Once I pick it up,
It travels like a kite.
Flowers need not be pretty
Colorful or glowing
I simply keep on blowing.

I like flowers pale or white
From flower to flower,
I go by flight
As I take nectar,
Pollen sticks to me
I carry it to the next
Flower I see.

My flowers have no need,
For pretty colors or shapes,
I do not attract insects or birds
A non living element,
Takes it's place.

Just like the sun,
Bright yellow I am,
Many insects love me,
For my nectar is grand.

My flowers are pale blue
And as dainty as can be,
I have invisible patterns
That birds cannot see.
My nectar is meant for others
Who get around just as well.

I like bright colors
Pinks, purples, and reds,
I reach deep down,
With my long billed head.

I am bee,
I like colors that are bright.
I am looking for nectar
In flowers of usually
Bright yellows or whites.

I hide sweet nectar
For only those who can reach
Down my deep narrow flower
With a long useful beak.
I am dark purple in color
To attract those who see
Colors not seen by a bee.




Inoa/Name: _____

La/Date: _____


Paste matching squares below side by side so that the correct pollinator is next to the flower it pollinates.

FANCY FLOWERS...




MANY INSECTS LIKE FLOWERS THAT ARE WHITE OR BRIGHTLY COLORED AND THOSE WITH SWEET NECTAR.

INSECTS



BRIGHT WHITE FLOWERS AND SWEET SCENTED NECTAR!

INSECTS UNKNOWINGLY CARRY POLLEN ON THEIR LEGS AND BODY WHEN GATHERING NECTAR.



THE PERFECT SHAPE FOR MY SHARP BEAK AND LOTS OF NECTAR SWEET TO EAT!

BIRDS

POLLEN GRAINS ARE DUSTED ON THE HEADS OF BIRDS SEEKING SWEET NECTAR,

I HAVE NO PREFERENCE, FOR I GET NOTHING IN RETURN, I AM JUST THE BREEZE THAT PASSES BY

WIND

POLLEN GRAINS BLOWN IN THE WIND, ARE BLOWN BY CHANCE, AS EACH GRAIN WILL LAND WHERE EVER THE WIND STOPS.

...AND BUZY POLLINATORS