



Growing healthy keiki, schools, and communities  
A program of the Kōkua Hawai'i Foundation

# THE BUTTERFLY GARDEN

## Student Workbook

### Grade K

Student's Name: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

Date: \_\_\_\_\_

[www.kokuahawaiifoundation.org/aina](http://www.kokuahawaiifoundation.org/aina)

ĀINA In Schools is a farm to school initiative launched in 2006 that connects children to their local land, waters, and food to grow a healthier Hawai'i. In addition to encouraging the use of locally grown fruits and vegetables in school meals and snacks, the program includes a standards-based nutrition, garden, and compost curriculum that empowers children to grow their own food, make informed food decisions, and reduce waste. ĀINA In Schools also promotes field trips to local farms, chef cooking demonstrations in classrooms, as well as waste reduction, garden, and cooking educational opportunities for families and community members.

## Six Integrated Program Components

### Core components:

- **Nutrition Education** empowers students to try new foods and make healthy choices that will last a lifetime.
- **Garden-Based Learning** transforms the school garden into a learning laboratory where all subjects are explored.
- **Healthy Food on Campus** increases local, fresh products in school lunches and snacks to provide healthy choices and support local farms.

### Additional components:

- **Agricultural Literacy** introduces students to where their food comes from and who grows and prepares their food.
- **Waste Reduction** reduces, reuses, and recycles waste in gardens, schoolyards, cafeterias, and classrooms.
- **Family & Community Outreach** raises awareness to support student, family, and community health and wellness.



"As an educator, I appreciate your program on so many levels. Your program does more than simply address state standards, but gives our students meaning and relevance as they study and engage in a living classroom where they literally see the fruits (and vegetables!) of their labor."

*School Principal*



## ĀINA In Schools Curriculum

- The ĀINA In Schools curriculum includes 8 lessons per year for grades K-6 that are standards-based, multi-subject, and hands-on. The curriculum supports a variety of learning styles and covers topics from the Nutrition, Garden, and Waste Reduction components. Successive units enable students to build on previous knowledge while developing a solid foundation in āina-based systems thinking. Nutrition and garden lessons also include close to the source, healthy snacks that reinforce key concepts.
- ĀINA In Schools Curriculum Trainings for Educators and online access to all materials via the Kōkua Hawai'i Foundation website enable educators to bring the ĀINA In Schools experience to students throughout Hawai'i and beyond. Lessons meet Common Core and HCPSIII standards for grades K-6 and are easily adaptable for other grades.

## Key KHF Farm to School Partnerships

- Co-leader and founding partner of the **O'ahu Farm to School Network:** [www.oahufarmtoschool.org](http://www.oahufarmtoschool.org).
- Founding member of the **Hawai'i Farm to School & School Garden Hui:** [www.hawaiiischoolgardenhui.org](http://www.hawaiiischoolgardenhui.org).
- Hawai'i Core Partner for the **National Farm to School Network:** [www.farmtoschool.org](http://www.farmtoschool.org).
- Kōkua Hawai'i Foundation is also an Advisory Committee member of the **Hawai'i Environmental Education Alliance:** [www.heea.org](http://www.heea.org).

*This Pre-Unit Survey is to see what you already know about these topics. It is ok if you don't know any of the answers. You will be learning about these topics this semester. Try your best and have fun!*

1. Draw a **circle** around the pollinator:



Flower

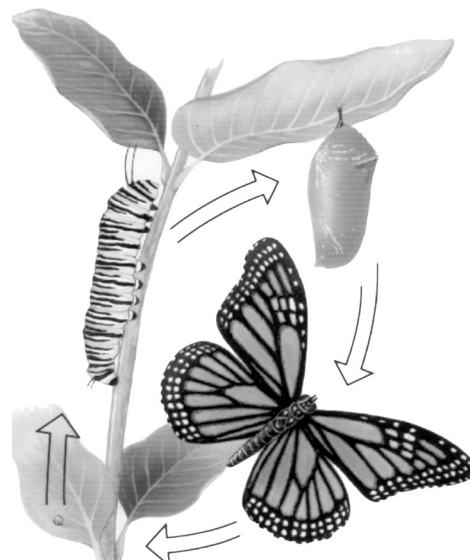


Carrot



Bee

2. Draw a **circle** around the chrysalis stage of the butterfly life cycle:



3. Draw a **circle** around what a seed grows into right after it is planted:




Sprout









Vegetable



Flower

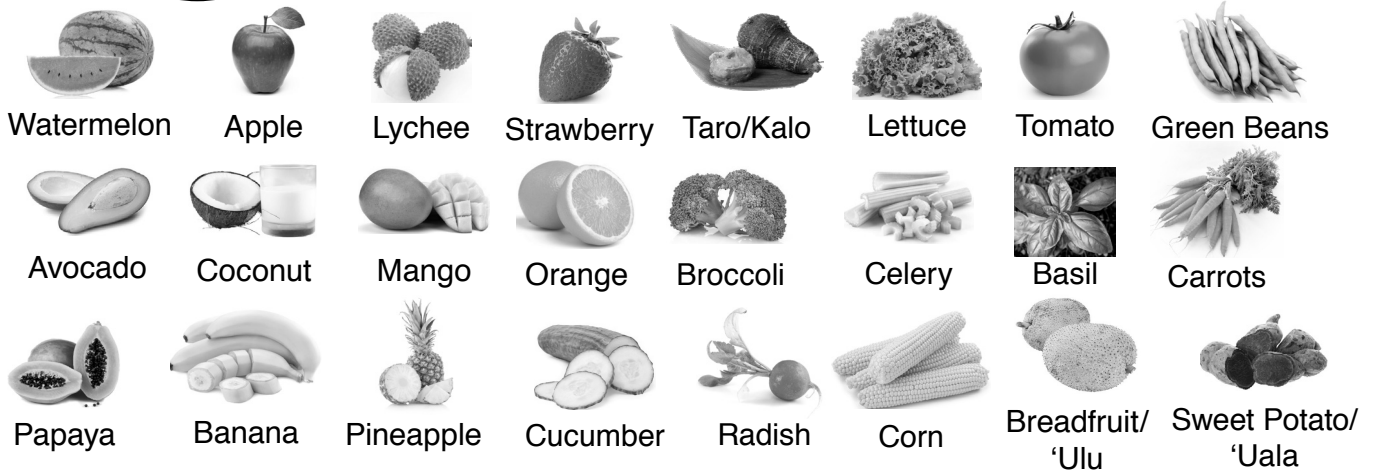
4. Do you like gardening? **Circle** ONE answer:  Yes  I don't know  No

5. Do you like eating fruits and vegetables? **Circle** ONE answer:  Yes  I don't know  No

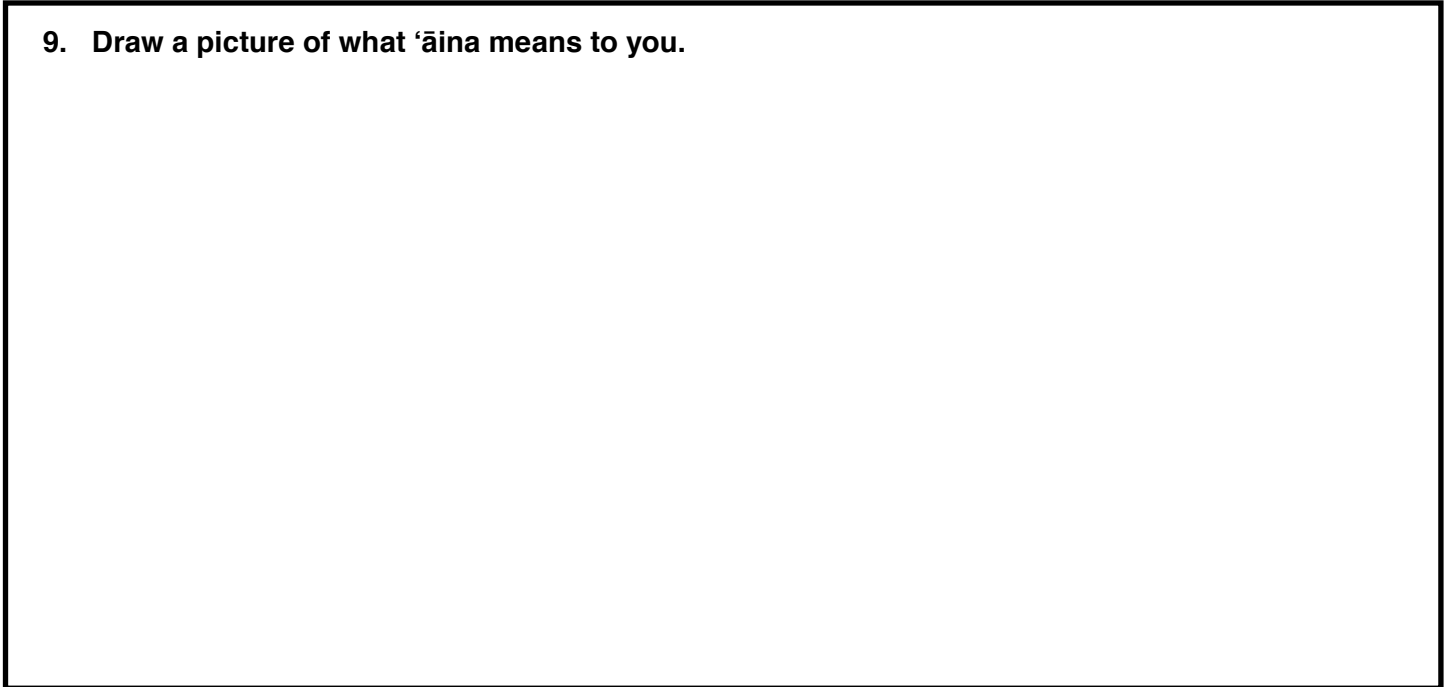
6. Do you like cooking? **Circle** ONE answer:  Yes  I don't know  No

7. Do you like 'ĀINA Lessons? **Circle** ONE answer:  Yes  I don't know  No

8. Draw a **Circle** around all the fruits and vegetables you like to eat:



9. Draw a picture of what 'āina means to you.



## Dear Parent or Caregiver:

This semester, kindergartners will be participating in four garden lessons being delivered by volunteers of 'ĀINA In Schools, a program of Kōkua Hawai'i Foundation. 'ĀINA In Schools is a farm to school initiative that connects children to their local land, waters, and food to grow a healthier Hawai'i. Program components vary from school to school and include nutrition education, garden-based learning, healthy snacks, farm field trips, chef visits, waste reduction, and family and community outreach.

Although the lessons are delivered once a month, the students will be continually engaged in between lessons with regular garden activities that include watering, weeding, making observations, and spending time in the garden.

Photos and Media Releases: By now each of you should have received a Kōkua Hawai'i Foundation Media Release Form. We hope that you have filled out this form and have submitted it to your child's classroom teacher. From time to time, KHF takes photos/videos of our lessons to highlight activities that are noteworthy.

To keep yourself up to date on what your child is doing in 'ĀINA, we suggest putting this up on your refrigerator or bulletin board and follow up as the lessons are delivered. You can help reinforce, engage, and learn along with your child by going over the lessons and activities after each lesson. A unit summary and suggested questions/activity for each lesson are listed below.

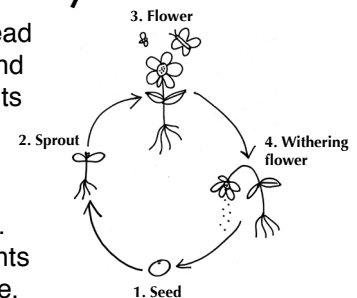
## Mahalo!

In **The Butterfly Garden** unit, students will plant a flower garden of marigolds, zinnias, and cosmos. The garden will serve as an important source of food (nectar) and shelter for butterflies. Each class will also care for a live monarch caterpillar and observe its transformation into a chrysalis and finally a butterfly. Key concepts for the unit include 'āina, the needs and life cycles of flowers and butterflies, planting and caring for a flower garden, metamorphosis, caring for caterpillars, pollination, habitats, and seed saving.



## Lesson 1 - Flower Life Cycle

In this lesson, students read *Zinnia's Flower Garden* and discuss the needs of plants and people. They explore the flower life cycle and plant flower seeds to create a Butterfly Garden. During the closing, students act out the flower life cycle.



### Questions to discuss with your child:

- What do plants need in order to survive and thrive?
- What are the stages in the flower life cycle?
- How will the flower garden help butterflies?

### Suggested home activity: Seed Collection

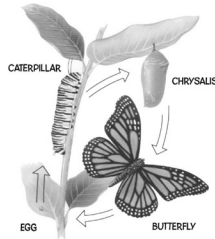
- Collect various seeds of differing sizes and texture.
- Make observations using senses and discuss differences and similarities.
- Ask questions: Are seeds alive? What are seeds for?

## Lesson 2 - Butterfly Life Cycle

In this lesson, students read *Life Cycles: Butterflies*, and discuss and act out the butterfly life cycle. They discover what butterflies need to survive and thrive. Students observe a live monarch caterpillar and learn how to care for it while it transforms into a butterfly over the next few weeks. They care for their garden and create a home for butterflies.

### Questions to discuss with your child:

- What do butterflies need in order to survive and thrive?
- What are the stages in the butterfly life cycle?



### Suggested home activity:

#### Everything has a Cycle of Life

- Learn about other organisms life cycles and identify similarities and difference between them.
- Compare these organisms to non-living things, and how their life cycles are also similar or different.

## Lesson 3 - Pollinators

In this lesson, students discuss their caterpillar experience and the important role of pollinators in helping plants create seeds (pollination). They act out the life cycles of flowers and butterflies, then visit their Butterfly Garden and draw the flowers and pollinators they see, explore the garden using magnifying glasses, and care for the garden.



### Questions to discuss with your child:

- How do flowers help butterflies?
- How do butterflies help flowers?
- Why are pollinators important?

### Suggested home activity: Native Hawaiian Butterflies

- Visit the website <http://cms.ctahr.hawaii.edu/pulelehua> and learn about the Kamehameha Butterfly, Hawai'i's State Insect and participate in the Pulelehua Project.



## Lesson 4 - Seed Harvest

In this lesson, students read *The Butterfly* and discuss seed saving. They make flower bouquets, harvest and study flower seeds from the garden. They eat fruits, vegetables, and/or seeds that were created with the help of pollinators.



### Questions to discuss with your child:

- What are the important elements of a butterfly habitat?
- Why is seed saving important?

### Suggested home activity: Plant a Flower Garden

- Start a flower garden either in a pot or allot some space in the garden at home. Suggested seeds to plant: marigold, zinnias and cosmos.
- As flowers bloom, observe presence of pollinators - bees or butterflies and discuss the importance of this relationship.

If you have any questions or are interested in becoming an ĀINA In Schools docent, please do not hesitate to ask.

To learn more about ĀINA In Schools at your child's school, please contact your school's ĀINA Team Coordinator, or contact:



ĀINA In Schools

[aina@kokuahawaiiifoundation.org](mailto:aina@kokuahawaiiifoundation.org)



**I WILL BE SAFE**

\*

**I WILL BE KIND**

\*

**I WILL HAVE  
AN OPEN MIND**

\*

**I WILL USE  
MY TIME WELL**



Student Worksheet  
**THE GARDEN AGREEMENTS**

Name .....

Class ..... Date .....

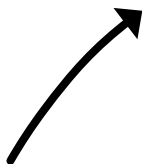
**Directions:** Draw a picture of you in the garden following the Garden Agreements.  
Color the Garden Agreements on page 5 if time permits.



# Flower Life Cycle

**Part 1 Directions:** Color and label the stages of the flower life cycle.

flower



sprout

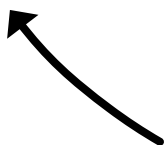


old  
flower



**Word List**

seeds  
 sprout  
 flower  
 old flower

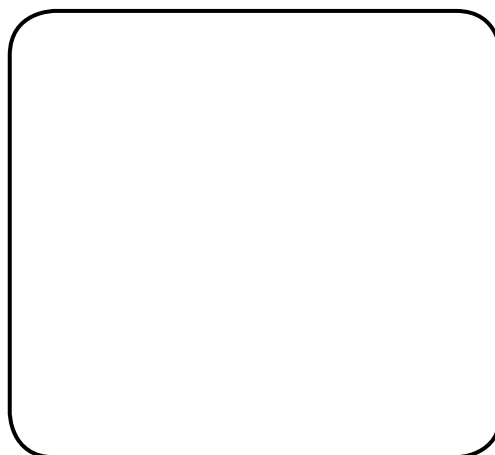
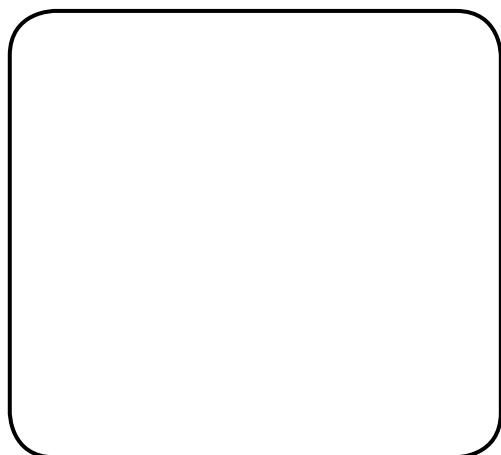
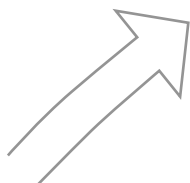
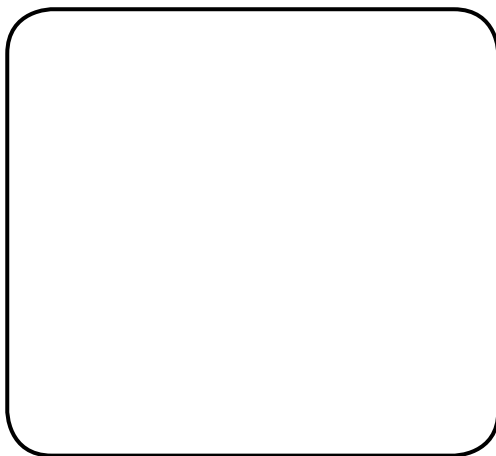


seeds



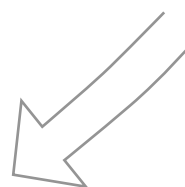
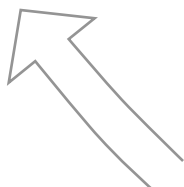
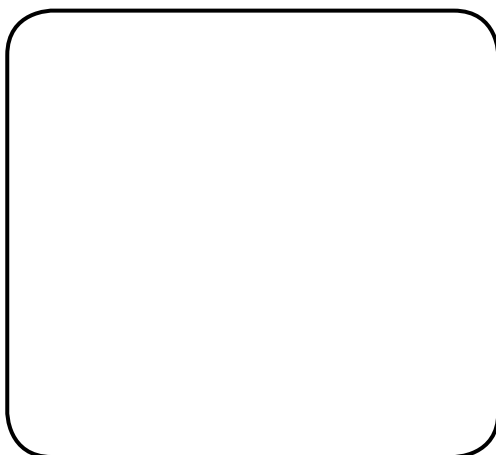
**Part 2 Directions:** Draw and color your own pictures of each stage of the flower life cycle.

## FLOWER



## SPROUT

## OLD FLOWER

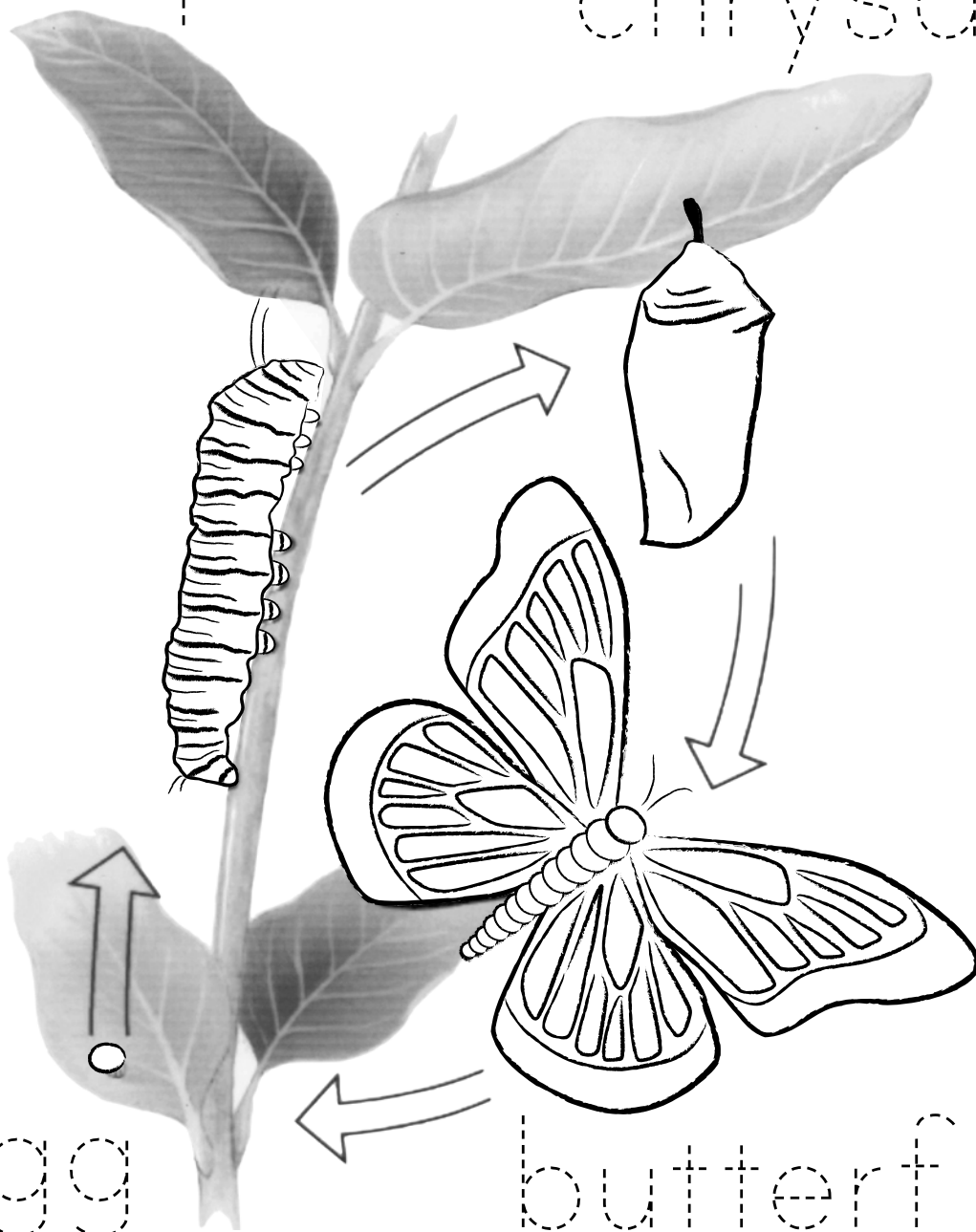


## SEEDS

# Butterfly Life Cycle

**Part 1 Directions:** Color and label the stages of the butterfly life cycle.

caterpillar      chrysalis



egg

butterfly



Student Worksheet  
**THE BUTTERFLY GARDEN**  
Lesson 2 \* Butterfly Life Cycle

Name .....

Class ..... Date .....

**Part 2 Directions:** Draw your caterpillar in the home you made for it.

1. What is your caterpillar's name?

.....

2. What does your caterpillar like to eat?

.....



Student Worksheet  
**THE BUTTERFLY GARDEN**  
Lesson 3 \* Pollinators

Name .....

Class ..... Date .....

# Butterfly Garden Drawing

**Part 1 Directions:** Using a pencil, draw the flowers and other things that you see in the garden.

**Part 2 Directions:** Color your drawing.



Student Worksheet  
**THE BUTTERFLY GARDEN**  
Lesson 3 \* Pollinators

Name .....

Class ..... Date .....

**Part 3 Directions:** Draw a picture of your butterfly and write about what they are doing in your picture.





Student Worksheet  
**THE BUTTERFLY GARDEN**  
Lesson 4 \* Seed Harvest

Name .....

Class ..... Date .....

**For Teachers:** Choose one of the following opinion questions for students, or create your own, regarding their gardening experience this semester.

**Do you like having a garden?  
List three reasons why.**

**What did you enjoy most  
about the garden?**

**What other types of plants would you  
like to grow in the garden?**

**What is your favorite kind of  
pollinator?**

**What is your favorite kind of garden  
creature that lives in the soil?**

**What was your favorite kind of fruit,  
vegetable, and/or seed that you tried?**



1. Draw a **circle** around the pollinator:



Flower

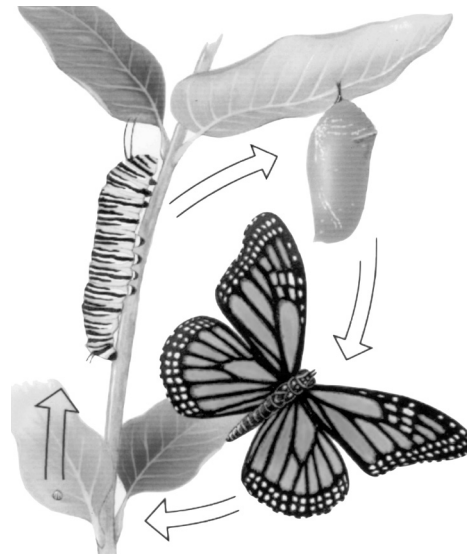


Carrot



Bee

2. Draw a **circle** around the chrysalis stage of the butterfly life cycle:



3. Draw a **circle** around what a seed grows into right after it is planted:















Sprout



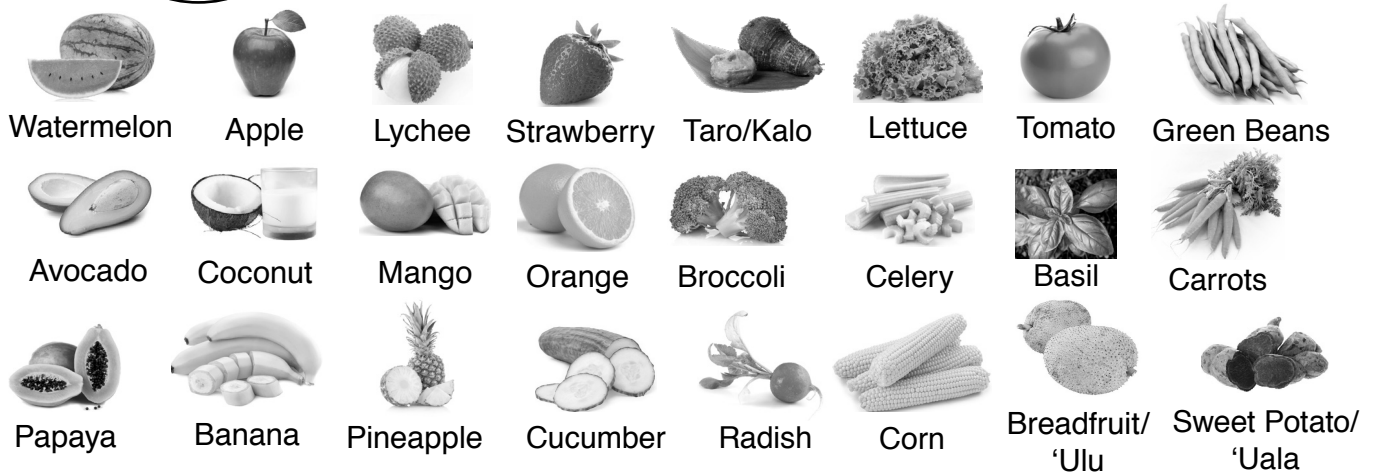
Vegetable



Flower

4. Do you like gardening? **Circle** ONE answer:  Yes  I don't know  No
5. Do you like eating fruits and vegetables? **Circle** ONE answer:  Yes  I don't know  No
6. Do you like cooking? **Circle** ONE answer:  Yes  I don't know  No
7. Do you like 'ĀINA Lessons? **Circle** ONE answer:  Yes  I don't know  No

8. Draw a **Circle** around all the fruits and vegetables you like to eat:



9. Draw a picture of what 'āina means to you.

INSIDE-  
COVER  
BLANK

OUTSIDE-  
COVER  
BLANK