



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

# THE LITTLE SEEDS, BIG PLANTS GARDEN

## Student Workbook

### Grade 1

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.hawaiischoolgardenhui.org](http://www.hawaiischoolgardenhui.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).

I have been at this school since grade: K 1 (circle one)

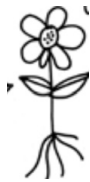
*This Pre-Unit Survey is to see what you already know about these topics. It is ok if you don't know any of the answers. You will be learning about these topics this semester. Try your best and have fun!*

1. Draw a **circle** around what is missing in #3

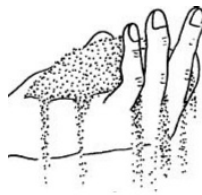
on the picture of the sunflower life cycle:



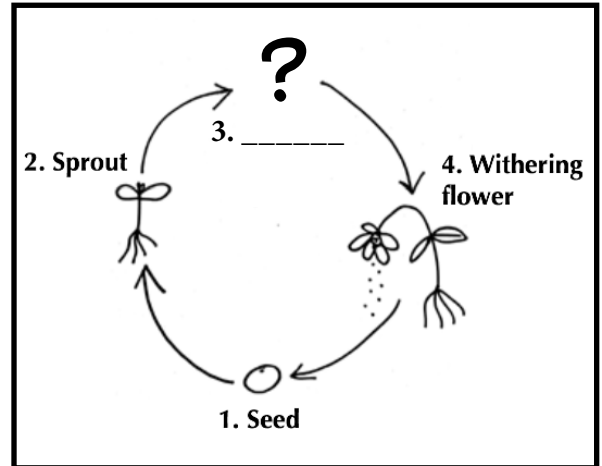
Bee



Flower



Soil



2. Draw a **circle** around what a flower makes as a result of pollination:



Leaf



Seeds



Bee

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



Sow Bug



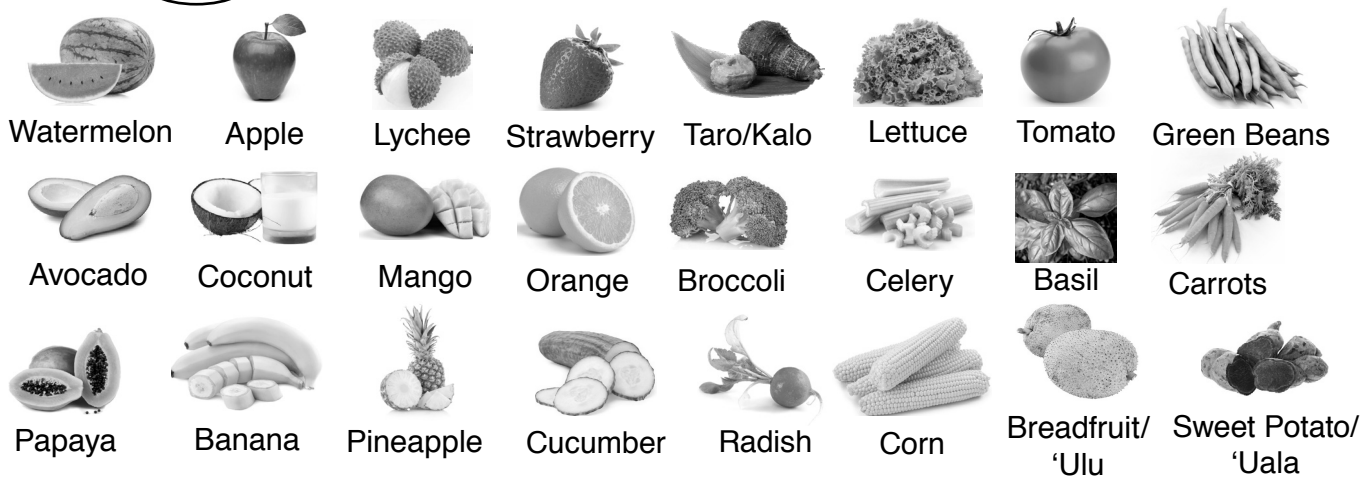
Butterfly



Worm

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, 1st graders 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.

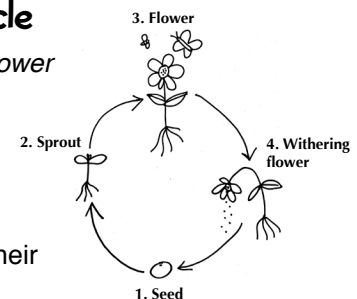
## Mahalo!

In **The Little Seeds, Big Plants Garden** unit, students will plant a Sunflower House and Bean Trellis. Key concepts include 'āina, the sunflower and green bean life cycles, measuring and counting, garden data collection, harvesting for food and seeds, pollination, and seed saving.



## Lesson 1 - Sunflower Life Cycle

In this lesson, students read the *Sunflower House* book and discuss what plants need to survive and thrive, and draw the life cycle of the sunflower. In the garden, students plant sunflower, pole bean, and marigold seeds to create a Sunflower House and Bean Trellis in their Little Seeds, Big Plants Garden.



### 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?

### Suggested home activity: Planting Sunflower Seeds

- Start a sunflower garden either in a pot or allot some space in the garden at home.
- Care for the plant after sprouting with regular garden care - watering and weeding.
- Suggested varieties to consider: mammoth - can get up to 8' tall or teddy bear - that grows up to 2-3' tall. Seeds can be purchased at any local home gardening stores or on-line at [www.highmowingseeds.com](http://www.highmowingseeds.com).

## Lesson 2 - Observations and Data

In this lesson, students act out the life cycle of a sunflower plant, discuss data collection and the use of tools for measuring. They collect and record data and observations about a sunflower plant of their choice and care for their garden.

### Questions to discuss with your child:

- How did you practice being scientists today?
- What changes have you observed in the garden?

### Suggested home activity: Weather Study and Observation

- Observe the movement of the sun across your home or garden throughout the day. Relate this to the growth patterns of plants.



## Lesson 3 - Green Bean Life Cycle

In this lesson, students learn how to properly harvest and wash green beans for eating and for saving seeds. They explore the green bean life cycle by reading *A Bean's Life* and act out the life cycle. In the garden they harvest, count, and wash their green beans and care for the garden. They enjoy a green bean snack or take home to share with their families.

### Questions to discuss with your child:

- What are the stages in the green bean life cycle?
- How do you know when the green bean seeds are ready to be harvested?
- How did the green bean taste?

### Suggested home activity: Flowers, Seeds, Fruits & Vegetables

- Discuss important role of flowers in the formation of seeds, fruits and vegetables.
- Talk about why plants make fruits.
- Cut open different fruits and vegetables and explore their seeds.



## Lesson 4 - Seed Harvest

In this lesson, students review the sunflower life cycle, discuss pollination, and read *From Seed to Sunflower*. They harvest mature sunflower heads and bean pods, then harvest and save seeds. They draw two life-sized sunflower charts, experience being inside the Sunflower House and Bean Trellis, care for their gardens, and enjoy a sunflower seed and green bean snack.

### Questions to discuss with your child:

- What is pollination and why is it important?
- Why is seed saving important?

### Suggested home activity: Plant a Flower Garden

- Harvest sunflower seed if wilted. Hang for about a week to dry.
- Separate seeds from the flower head by rubbing two flowers together or by hand.
- Save seeds by placing in an airtight container and label.
- Generally, replanting can be done shortly after seeds have dried.



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.

# Sunflower Life Cycle

**Part 1 Directions:** Draw, color, and label the four stages of the sunflower's life.

**Word List**

flower  
seed  
sprout  
withered flower

2 \_\_\_\_\_

3 \_\_\_\_\_

1 \_\_\_\_\_

4 \_\_\_\_\_





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# THE LITTLE SEEDS, BIG PLANTS GARDEN

## Lesson 1 \* Sunflower Life Cycle

Name .....

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

### What Do Plants Need to Survive and Thrive?

**Part 2 Directions:** List the five things that a plant needs to survive and thrive. Choose words from the list in the box.

#### WORD LIST

WATER	MILK	CAR	CANDY	HAT
TOYS	SOIL	LOVE	AIR	SUN

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**Part 3 Directions:** Draw a picture of what you think your Sunflower House and Bean Trellis Gardens will look like when the plants grow up:



## Garden Observations & Data

**Directions:** Choose a sunflower plant in the garden, label it with your name, and gather data from your plant once a week.

**Unit of Measurement** (e.g., inches, hand-lengths, paper clips): \_\_\_\_\_

Today's Date				
How tall is your plant?				
How many leaves does it have?				
How long is the biggest leaf?				
Draw a picture of your sunflower plant				



Student Worksheet  
**THE LITTLE SEEDS, BIG PLANTS GARDEN**  
Lesson 2 \* Observations & Data

Name .....

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

**Part 2 Directions:** Draw a picture of you next to your sunflower.

1) How tall do you think your sunflower will grow?

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2) Who do you think will be taller at the end of the semester? You or your sunflower?

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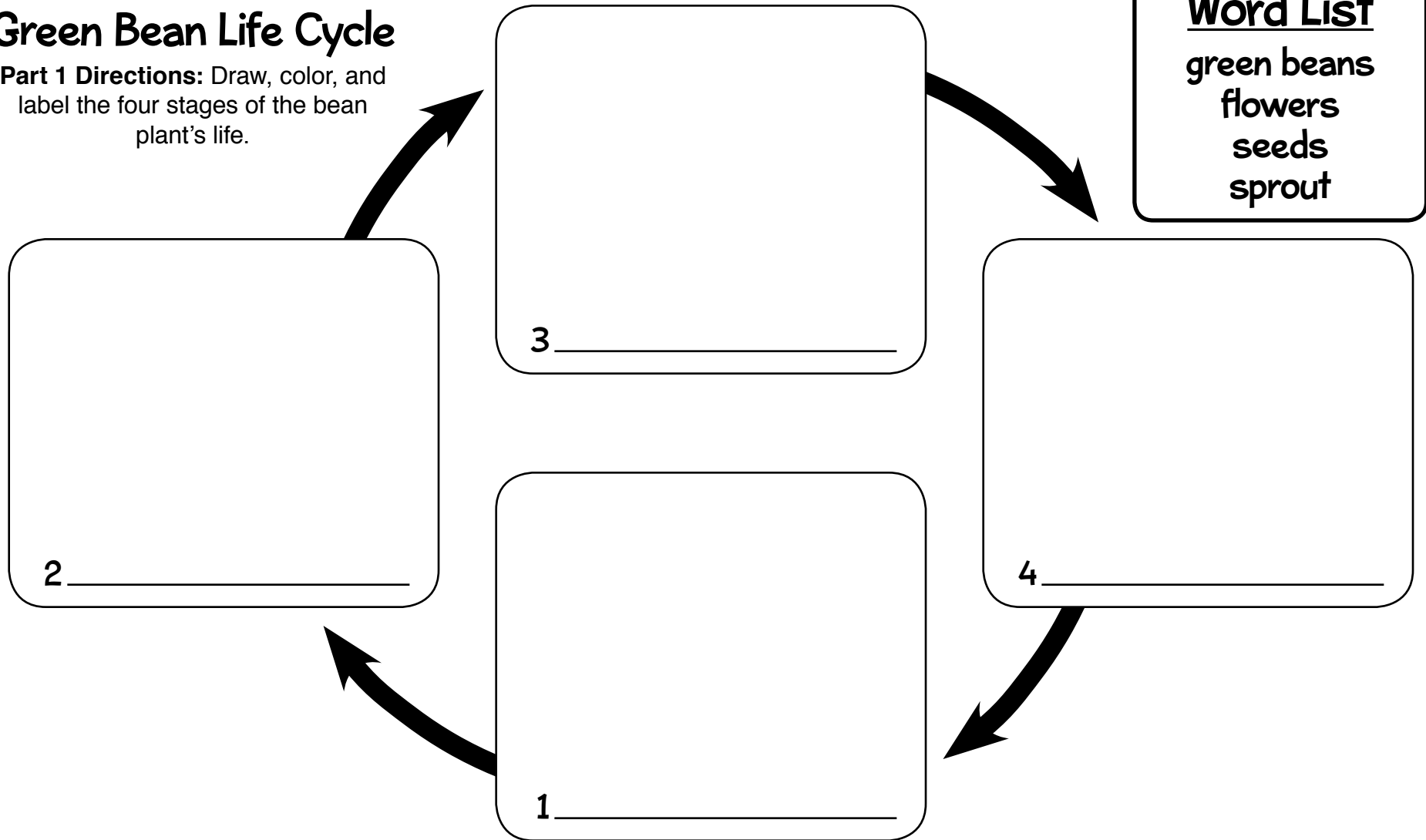
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## Green Bean Life Cycle

**Part 1 Directions:** Draw, color, and label the four stages of the bean plant's life.





Student Worksheet  
**THE LITTLE SEEDS, BIG PLANTS GARDEN**  
Lesson 3 \* Green Bean Life Cycle

Name .....

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

**Part 2 Directions:** Draw a picture of you eating your green bean.  
Describe how it tasted.





## Garden Reflection

**Directions:** Answer the question that your teacher selects by drawing and writing in the spaces provided below.



**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?**

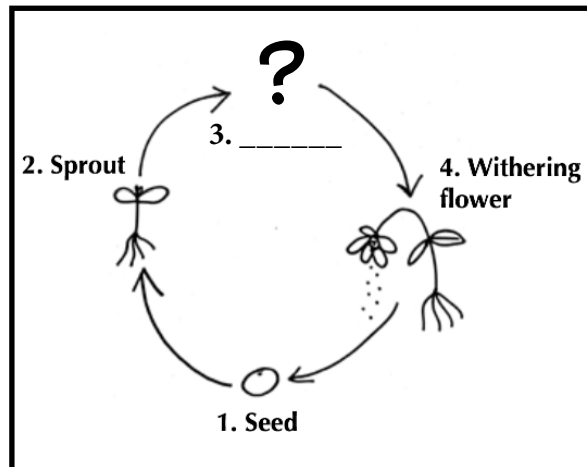
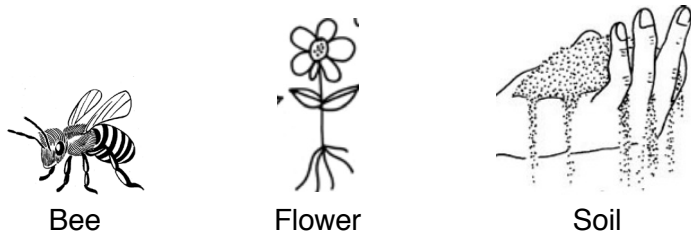
**What is your favorite kind of  
pollinator?**

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

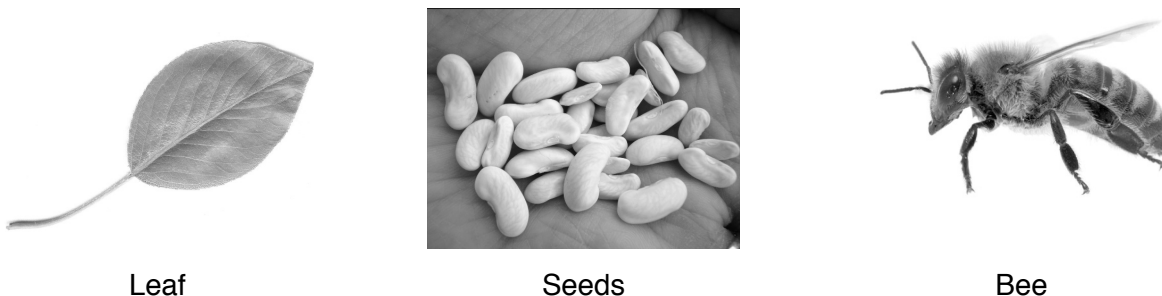
**What did you like best about the  
garden lessons this semester?**

I have been at this school since grade: K 1 (circle one)

1. Draw a **circle** around what is missing in #3 on the picture of the sunflower life cycle:






2. Draw a **circle** around what a flower makes as a result of pollination:






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



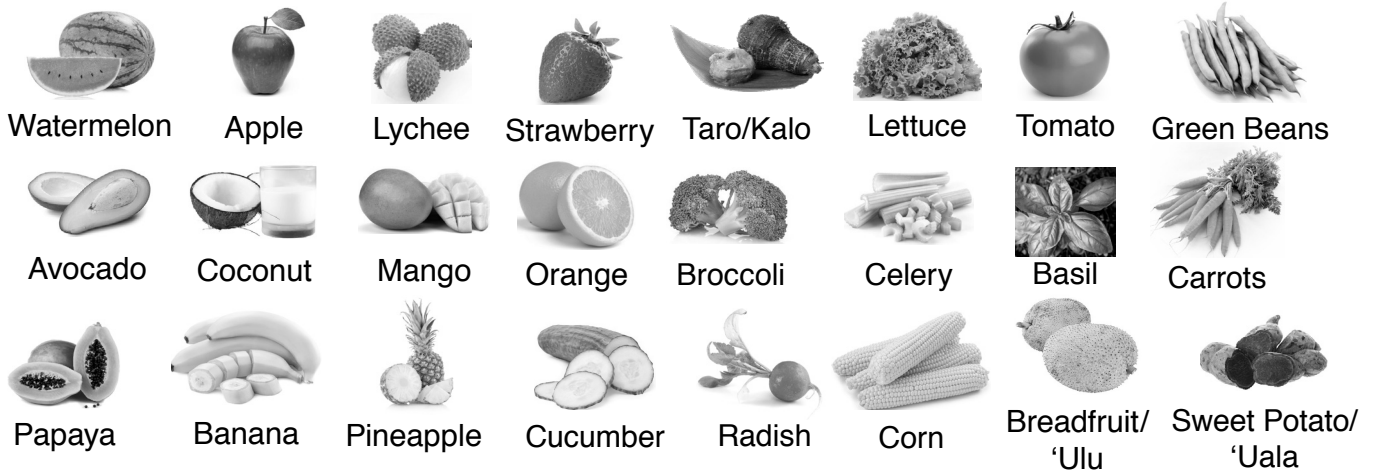
5. Do you like gardening? **Circle** ONE answer:  Yes  I don't know  No

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

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

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

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



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

INSIDE-  
COVER  
BLANK



OUTSIDE-  
COVER  
BLANK