



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

COMPOST LESSONS

Class Data Workbook

Grade 3

Teacher's Name: _____

Classroom: _____

Date: _____



A farm to school program connecting children to their land, waters, and food to grow a healthier Hawai'i

'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.



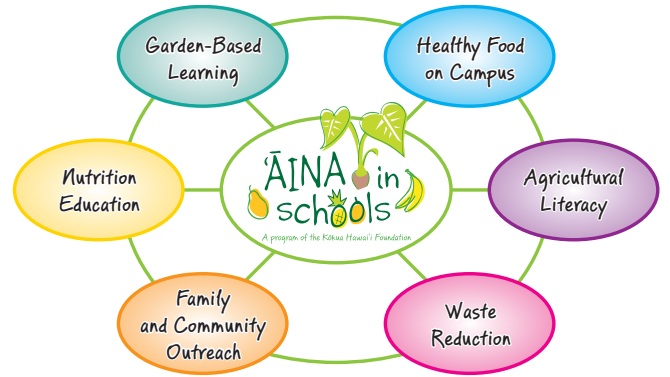
Six Integrated Program Components

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.
- Founding member of the **Hawai'i Farm to School & School Garden Hui**: www.hawaiischoolgardenhui.org.
- Hawai'i State Lead for the **National Farm to School Network**: www.farmtoschool.org.
- Kōkua Hawai'i Foundation is also an Advisory Committee member of the **Hawai'i Environmental Education Alliance**: www.heea.org.

'ĀINA In Schools is a program of the Kōkua Hawai'i Foundation



www.kokuahawaiifoundation.org/aina



Class Data Sheet
COMPOST LESSONS

Teacher Name.....

Lesson 1 * Aerobic Composting: Theory and Building Classroom.....

Temperature Log

Directions: Use the compost thermometer to measure the temperature inside your aerobic compost pile every day. Record your data in the table below. Note: After several days at 150°F (or 65°C; where weed seeds and pathogens are inactivated), it is best to keep the pile between 104° and 131°F (40° to 55°C) until the compost is mature (contents are unrecognizable). Add carbon materials to cool the pile and nitrogen materials to heat it up, plus water as needed to keep it moist.

Date & Initials	Time & Temperature	Turned the Pile?	Added Materials?	Watered the Pile?	Observations

Use the backside of this log if more space is needed.



Class Data Sheet
COMPOST LESSONS

Teacher Name.....

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Date & Initials	Time & Temperature	Turned the Pile?	Added Materials?	Watered the Pile?	Observations

Copy additional pages of this log if more space is needed.



Weekly Aerobic Compost Log

Directions: Every week the Compost Monitors will:

1. Add carbon and nitrogen materials to the compost pile. When adding plant materials, be sure to chop them first, then layer them on top of the active compost pile (be sure to keep the top of the pile level and always cover food waste with a layer of carbon, e.g., mulch).
2. Optional: Weigh and record the amounts of carbon and nitrogen materials added.
3. Water the pile thoroughly.
4. Record activities and observations in the table below.

Date & Initials	Types (and Pounds) of Carbon Materials Added	Types (and Pounds) of Nitrogen Materials Added	Watered the Pile?	Observations

Use the backside of this log if more space is needed.



Weekly Aerobic Compost Log

Directions: Every week the Compost Monitors will:

1. Add carbon and nitrogen materials to the compost pile. When adding plant materials, be sure to chop them first, then layer them on top of the active compost pile (be sure to keep the top of the pile level and always cover food waste with a layer of carbon, e.g., mulch).
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3. Water the pile thoroughly.
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Copy additional pages of this log if more space is needed.



Class Data Sheet
COMPOST LESSONS

Lesson 2 * Vermicomposting: Bin Setup

Teacher Name.....

Classroom.....

Weekly Vermiculture Log

Directions: Every week the Vermiculture Monitors will:

1. Add food waste (fruit and vegetable scraps) to the worm bin.
2. Add shredded, fluffed, and moistened carbon (bedding) materials to the bin as needed. Use the spray bottle to moisten the bedding if it is dry.
3. Optional: Weigh and record the amounts of food waste and bedding added.
4. Empty the leachate from the worm bin. Dilute it with water and water fruit trees on campus.
5. Record activities and observations in the table below.

Date & Initials	Types (and Pounds) of Food Waste Added	Types (and Pounds) of Bedding Materials Added	Sufficient Moisture?	Observations

Use the backside of this log if more space is needed.



Class Data Sheet
COMPOST LESSONS

Lesson 2 * Vermicomposting: Bin Setup

Teacher Name.....

Classroom.....

Weekly Vermiculture Log

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1. Add food waste (fruit and vegetable scraps) to the worm bin.
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3. Optional: Weigh and record the amounts of food waste and bedding added.
4. Empty the leachate from the worm bin. Dilute it with water and water fruit trees on campus.
5. Record activities and observations in the table below.

Date & Initials	Types (and Pounds) of Food Waste Added	Types (and Pounds) of Bedding Materials Added	Sufficient Moisture?	Observations

Copy additional pages of this log if more space is needed.



Daily Bokashi Log

Directions: For two weeks (until Lesson 4) the Bokashi Monitors will carry out the following tasks:

- 1. Every School Day:** Lift the top bucket out of the bottom bucket (Bokashi Compost Bucket), and drain any liquids that may be found in the bottom bucket into a container (e.g., large yogurt container). Fill the container with water to dilute the drained liquid. Apply the diluted liquid to the soil around trees on campus (do not apply to edible plant parts).
- 2. Two Times Per Week** (e.g., Mondays and Thursdays): Open lid and smell, the mix should smell like pickles. If the mix has a very bad smell it should be discarded in the trash. White mold is fine; black mold is not.

Date & Initials	Liquid Drained?	How Does It Smell?	Observations

Use the backside of this log if more space is needed.



Class Data Sheet
COMPOST LESSONS

Teacher Name.....

Lesson 3 * Anaerobic Composting: Bokashi Prep

Classroom.....

Daily Bokashi Log

Directions: For two weeks (until Lesson 4) the Bokashi Monitors will carry out the following tasks:

- 1. Every School Day:** Lift the top bucket out of the bottom bucket (Bokashi Compost Bucket), and drain any liquids that may be found in the bottom bucket into a container (e.g., large yogurt container). Fill the container with water to dilute the drained liquid. Apply the diluted liquid to the soil around trees on campus (do not apply to edible plant parts).
- 2. Two Times Per Week** (e.g., Mondays and Thursdays): Open lid and smell, the mix should smell like pickles. If the mix has a very bad smell it should be discarded in the trash. White mold is fine; black mold is not.

Date & Initials	Liquid Drained?	How Does It Smell?	Observations

Copy additional pages of this log if more space is needed.



Class Data Sheet
COMPOST LESSONS

Lesson 5 * Aerobic Composting: Harvest

Teacher Name.....

Classroom.....

Weekly Aerobic Compost Log

Directions: Every week the Compost Monitors will:

1. Add carbon and nitrogen materials to the compost pile. When adding plant materials, be sure to chop them first, then layer them on top of the “active” compost pile (be sure to keep the top of the pile level and always cover food waste with a layer of carbon, e.g., mulch).
2. Optional: Weigh and record the amounts of carbon and nitrogen materials added.
3. Water the pile thoroughly.
4. Record activities and observations in the table below.

Date & Initials	Types (and Pounds) of Carbon Materials Added	Types (and Pounds) of Nitrogen Materials Added	Watered the Pile?	Observations

Use the backside of this log if more space is needed.



Class Data Sheet
COMPOST LESSONS

Lesson 5 * Aerobic Composting: Harvest

Teacher Name.....

Classroom.....

Weekly Aerobic Compost Log

Directions: Every week the Compost Monitors will:

1. Add carbon and nitrogen materials to the compost pile. When adding plant materials, be sure to chop them first, then layer them on top of the “active” compost pile (be sure to keep the top of the pile level and always cover food waste with a layer of carbon, e.g., mulch).
2. Optional: Weigh and record the amounts of carbon and nitrogen materials added.
3. Water the pile thoroughly.
4. Record activities and observations in the table below.

Date & Initials	Types (and Pounds) of Carbon Materials Added	Types (and Pounds) of Nitrogen Materials Added	Watered the Pile?	Observations

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Weekly Vermiculture Log

Directions: Every week the Vermiculture Monitors will:

1. Add food waste (fruit and vegetable scraps) to the worm bin (NO papaya seeds!).
2. Add shredded, fluffed, and moistened carbon (bedding) materials to the bin as needed. Use the spray bottle to moisten the bedding if it is dry.
3. Optional: Weigh and record the amounts of food waste and bedding added.
4. Empty the leachate from the worm bin. Dilute it with water and empty into soil around trees.
5. Record activities and observations in the table below.

Date & Initials	Types (and Pounds) of Food Waste Added	Types (and Pounds) of Bedding Materials Added	Sufficient Moisture?	Observations

Use the backside of this log if more space is needed.



Weekly Vermiculture Log

Directions: Every week the Vermiculture Monitors will:

1. Add food waste (fruit and vegetable scraps) to the worm bin (NO papaya seeds!).
2. Add shredded, fluffed, and moistened carbon (bedding) materials to the bin as needed. Use the spray bottle to moisten the bedding if it is dry.
3. Optional: Weigh and record the amounts of food waste and bedding added.
4. Empty the leachate from the worm bin. Dilute it with water and empty into soil around trees.
5. Record activities and observations in the table below.

Date & Initials	Types (and Pounds) of Food Waste Added	Types (and Pounds) of Bedding Materials Added	Sufficient Moisture?	Observations

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