

Nourishment: Feeding Our Mind and Body with What It Needs to Stay Healthy and Flourish
 Theme 3: Grades 3–5

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
Food Culture	Articulate relationships to food via stories and memories from multiple perspectives	Recount stories around food and family food traditions. Draw conclusions about the relationships between food and family.	Interview a family member to create a family food story. Research food that was important in your family. Create a garden cookbook based on family food stories. Introduce diverse garden food plants. Map origin and share cultural uses of plants. Invite family members to garden to share food story.	Compare and contrast food stories from various cultures. Interview a family member to create a family food story. Research food that was important in your family. Create a family cookbook.	SL.3.1 SL.3.3 SL.4.1 SL.4.3 SL.5.1 SL.5.3	NA	5-ESS3-1	2.5.1 2.5.2
	Understand and define food traditions and celebrations and how they affect food choices and community food systems	Listen to a variety of food stories from a variety of cultures. Identify a family food tradition that has an impact on food choice and community.	Identify holiday meals among various students. Observe how holiday meals impact food choice and community. Process and prepare a plant-based traditional dish. Grow and prepare one traditional Hawaiian food crop. Harvest, compose a still life and watercolor a cornucopia.	Compare and contrast food stories from various cultures. Develop an argument that connects food stories to resource management. Create a multi-media presentation to share findings with class and community.	SL.3.1 SL.3.3 SL.3.5 SL.4.1 SL.4.3 SL.4.5 SL.5.1 SL.5.3 SL.5.5	NA	5-ESS3-1	2.5.2

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
	Appreciate that food is place-based and that different regions around the world have distinct culinary attributes	Different regions around the world have distinct culinary attributes.	<p>Conduct a survey about the culinary cultures represented by garden students.</p> <p>Grow simple gardens with cultural culinary food plants, e.g., Hawaiian, Filipino, Chinese, European, etc.</p>			NA	5-ESS3-1	2.5.2
	Recognize quality foods and understand relationships between food and physical/ mental wellness as well as disease prevention	Infer that eating habits and diet choices directly affect physical/mental wellness and disease prevention.	<p>Identify and describe favorite food plants.</p> <p>Examine 'Āina Food Guide. Grow and taste one food from each category: protective foods, energy foods, bodybuilding foods, brain foods, and caution foods.</p> <p>Define 'Close to source,' and provide evidence from the garden.</p> <p>Explore the link between good food and good health through evaluating a food log.</p> <p>Make a poultice with comfrey, aloe, etc. and understand how garden products can support health.</p>	<p>Generate and compare solutions to create nutritional opportunities for food-insecure regions.</p> <p>Create multi-media presentation of the solutions to share with class, community.</p>	<p>SL.3.1 SL.3.3 SL.3.5</p> <p>SL.4.1 SL.4.3 SL.4.5</p> <p>SL.5.1 SL.5.3 S.L.5.5</p>	NA	<p>5-LS2-1</p> <p>3-5-ETS1-2</p>	NA

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
Food Justice & Security	Analyze the social, economic, and environmental impacts of food systems including the energy inputs and outputs	Understand how a modern food system works in context of social, environmental, and economic systems.	<p>Examine agricultural practices of various cultures.</p> <p>Log planting and harvest data, record weight of harvest. Identify patterns in data.</p> <p>Identify social, economic and environmental inputs needed to grow plants.</p> <p>Compare and contrast a garden task completed by manual labor versus machine.</p> <p>Identify and model wise use of resources.</p> <p>Draw a model of various food systems including energy inputs and outputs.</p> <p>Compare and contrast various inputs in different environments needed to grow plants.</p> <p>Graph seasonal data from garden logs.</p>	<p>Use a bar graph to represent a food system, food miles, inputs and outputs.</p> <p>Measuring distances on a map of a food system.</p> <p>Show knowledge of relative size – feet vs. miles. Local food close by (feet) vs. imported (miles).</p> <p>Create multi-media presentation of the solutions to share with class, community.</p>	<p>SL.3.5 3.SL.4 3.RI.1 3.RI.2 3.RI.3</p> <p>SL.4.5 4.RI.1 4.RI.2 4.RI.3</p> <p>SL.5.5 5.RI.2</p>	<p>3.MD.B.3</p> <p>3.MD.B.4</p> <p>4.MD.A.1</p>	<p>3-LS4-3 3-LS4-4</p>	NA
	Analyze food systems for justice, security, access, affordability, and distribution. Be able to advocate for food justice and security	Identify food justice and injustice. Identify food security and insecurity.	<p>Examine global and/or local instances of food justice and injustice.</p> <p>Identify where foods come from and contrast with foods from the garden.</p> <p>Create a food map for students' home. Compare and contrast locally grown food to</p>	<p>Use a bar graph to represent a food system, food miles, inputs and outputs.</p> <p>Measuring distances on a map of a food system.</p> <p>Show knowledge of relative size - feet vs. miles. Local food close</p>	<p>3.SL.4 3.RI.1 3.RI.2 3.RI.3</p> <p>4.RI.1 4.RI.2 4.RI.3</p> <p>5.RI.2 5.SL.4</p>	<p>3.MD.B.3</p> <p>3.MD.B.4</p> <p>4.MD.A.1</p>	<p>3-5-ETS1-2 <i>Generate and compare possible solutions to food insecurity.</i></p>	8,5,2

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
			imported food (e.g., compare and contrast Ka'ū oranges vs. Sunkist oranges). Design a barter system where garden resources are identified for exchange with other goods. Read about food deserts. Map where foods come from. 'Āina in Schools' "Comparing Food Systems" food justice information. Define food map.	by (feet) vs. imported (miles). Create multi-media presentation to share findings.				
	Understand that discarded food is a valuable resource. Identify and apply practices that eliminate and/or redirect discarded food from landfill systems	Define and describe landfills. Define and describe food waste.	Create a vermiculture system and utilize castings as fertilizer. Incorporate garden snack discards into garden compost system. Layer with appropriate amounts of green/brown components. Compare and contrast volume of food discards in a classroom versus a school-wide lunch program. Examine a trashcan after lunch. Identify food waste (i.e., food waste audit).	Define and design a waste reclamation model for a variety of locations. Generate and compare possible solutions to landfill waste Create multi-media presentation to share findings. Unit cubes of food waste.	SL.3.5 SL.4.5 SL.5.5 5.SL.4	5.MD.3	3-5-ETS1-1 3-5-ETS1-2	NA

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
			<p>Identify practices that produce food waste.</p> <p>Identify local landfill systems.</p> <p>Identify local wastewater systems.</p>					
	Understand the economic value and ecological impact of a crop or product in your region	Understand crops grown for economic value.	<p>Create a model or drawing demonstrating the cycle of a single crop or product (bananas) from farm to table. Grow that product in garden.</p> <p>Map local crop production and/or food sources.</p> <p>Make an agricultural map showing kinds of foods grown in your regional area.</p>	<p>Correlate crop or seed cycle to the native habitat of that crop or seed.</p> <p>Generate and compare possible solutions to dispersing seeds in various food-insecure locations.</p> <p>Formulate an argument about how human activity has changed crop or seed cycle.</p> <p>Create multi-media presentation to share findings. Report findings to classroom.</p> <p>4.SL.1 5.SL.1</p>	<p>3-LS4-3 3-LS4-4</p> <p>3.SL.1 3.SL.4</p> <p>3-ESS2-2</p> <p>5.SL.4 5.SL.5</p>	<p>3.MD.3 3.MD.4</p> <p>4.MD.1 4.MD.2</p> <p>5.MD.5</p>	3-5-ETS1-2	NA
	Identify practices using on-going observation that create resilient food systems, e.g., seed saving, encouraging biodiversity, nutrient recycling, and water conservation	Define food security and food insecurity. Identify practices that can help secure food.	<p>Visit a local farm that is practicing regenerative/sustainable agriculture.</p> <p>Design and build greywater and/or rain catchment systems.</p> <p>Identify wastewater systems in the garden and community.</p> <p>Listen to the experiences of a local</p>	<p>Investigate environmental changes that affect food security.</p> <p>Generate and compare solutions to food insecurity.</p> <p>5.SL.4 Create multi-media presentation to share findings. Report findings to classroom.</p>	<p>3.SL.1 3.SL.4 3.RI.3 3.RI.1 3.RI.2</p> <p>4.SL.1 4.RI.1 4.RI.2 4.RI.3</p> <p>5.RI.2 5.SL.1 5.SL.5</p>		3-LS4-3 3-LS4-4	NA

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
			bee farmer. Grow plants to attract bees. Observe bees in the garden. Count and record the numbers of bees observed and what plants attract the most bees. Grow and save seed from at least one crop. Identify open-pollinated and heirloom seeds. Read seed packets to identify seed stories.					
Food Seasons and Place	Know what grows well in your place and how and when to grow it	Summarize processes used to grow a crop. Summarize processes used to consume the crop. Predict inputs and systems needed for success.	Design and create a garden bed, planning for seasonal variations in order to produce optimal success. Read seed catalogues and predict what varieties will grow well for your microclimate. Use seasonal produce to preserve, share, or consume. Understand the concepts of warm and cool, wet and dry weather crops. Identify and plant according to the season. Identify pests in season. Examine Hawaiian Moon Calendar. Observe seasons for fishing and planting. Plant in the garden	Investigate climate differences on crop production. Create multi-media presentation to share findings. Report findings to classroom. Analyze and harvest activities for volume. Track garden harvest over time.	3.RI.1 3.RI.2 3.RI.3 3.SL.1 3.SL.4 4.RI.1 4.RI.2 4.SL.1 5.RI.2 5.NF.2 5.SL.1 5.SL.4 5.SL.5	3.MD.2 4.MD.2 4.MD.1 5.MD.5 5.G.2	3-LS4-3 3-LS4-4	

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
			according to Hawaiian moon calendar.					
	Understand the components of your local food system	Identify local food systems.	<p>Visit a local farm or have a farmer visit the school garden.</p> <p>Invite an animal-farming expert.</p> <p>List local farmers' markets.</p>	<p>Generate and compare solutions to create food procurement opportunities for food-insecure regions.</p> <p>Create multi-media presentation to share findings. Report findings to classroom.</p>	<p>3.SL.1 3.SL.4 4.SL.1 5.SL.1 5.SL.4 5.SL.5</p>		3-5-ETS1-2	NA
	Recognize quality foods: connect ripe, fresh foods to optimal nutritional value and taste	Define quality foods.	<p>Compare and contrast taste of foods from the garden to canned, frozen, or dried foods.</p> <p>Compare and contrast taste of locally grown vs. imported (banana from Hawai'i vs. banana from Ecuador)</p> <p>Connect ripe, fresh foods to optimal value and taste. Taste Tests in the garden or classroom.</p> <p>One-word poem utilizing descriptive language about garden experiences.</p>	<p>Generate and compare solutions to create nutritional opportunities for food-insecure regions.</p> <p>Create multi-media presentation to share findings. Report findings to classroom</p>	<p>3.SL.1 3.SL.4 3.RI.1 3.RI.2 3.RI.3 4.SL.1 4.RI.1 4.RI.2 5.SL.1 5.SL.4 5.SL.5 5.RI.2</p>		<p>5-PS1-2 5-PS1-3 3-5-ETS1-2</p>	<p>7.5.2 5.5.1-6</p>
Food and Nourishment	Use food product information to discern healthy choices	Observe that products from the store have nutritional labels. Learn to read food labels.	<p>Use “Aina Food Guide” to classify and label garden crops.</p> <p>Describe various representations of foods (commercials, magazines, store shelves). Compare</p>	Create multi-media presentation to share findings.	<p>3.SL.4 3.RI.1 3.RI.2 3.RI.3 4.RI.1 4.RI.2 5.SL.4</p>		5-ESS3-1	<p>3.5.1 2.5.5</p>

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
			<p>and contrast representations with actual food grown in the garden.</p> <p>Practice reading food labels. Discuss whole and processed foods.</p> <p>Identify and discuss food labeling and marketing strategies, what does “natural” mean.</p> <p>Have students create an advertisement for a fresh fruit or vegetable.</p>		5.RI.2			
	Know the benefits of a balanced, diverse diet	<p>Understand nutritional benefits from different foods.</p> <p>Understand eating a variety of foods provides optimal nutrition.</p>	<p>Introduce “Eating from a Rainbow.” Whole Food Foundation’s “What’s under the Rainbow.” Identify nutritional attributes and tastes provided by different colored foods.</p> <p>Introduce “Rethink Your Drink HI.” Identify and taste a variety of drinks made from garden ingredients.</p> <p>Investigate “My Eat Local Hawai’i Plate”.</p> <p>Create and design restaurant menus based on healthy food servings.</p> <p>Experiment with feeding garden plants only water, soda, or Gatorade. Record observations.</p>	<p>Measure and graph sugar in drinks.</p> <p>Create multi-media presentation to share findings. Report findings to classroom</p>	<p>3.SL.1</p> <p>3.SL.4</p> <p>4.SL.1</p> <p>5.SL.1</p> <p>5.SL.4</p> <p>5.SL.5</p>	3.MD.3		7.5.2

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
	Understand the relationships between healthy soil, healthy food, and healthy people	Define and understand soil/plant nutrition cycle and its effect on human health.	<p>Observe and describe the Soil/Plant Nutrition Cycle.</p> <p>Draw a diagram indicating Soil/Plant Nutrition Cycle.</p> <p>Prepare, amend, turn, and harvest compost to add to garden beds.</p> <p>Harvest food from the amended garden bed and discuss process used.</p> <p>Prepare and share the snack.</p> <p>Relate healthy soil with healthy crops and good nutrition.</p>	<p>Graphing data from diagram generated in garden.</p> <p>Create multi-media presentation to share findings.</p>	<p>3.RI.1 3.RI.2 3.RI.3</p> <p>4.RI.1 4.RI.2</p> <p>5.RI.2</p>	<p>3.MD.3</p> <p>5.SL.4</p>	4-LS-1	1.5.1 7.5.2
	Recognize and appreciate that foods provide different flavors and nutritional attributes	Recognize and appreciate that foods provide different flavors and nutritional attributes.	<p>Taste a variety of herbs; describe their flavors and name the herb.</p> <p>Compare and contrast foods prepared with and without herbs.</p>	<p>Investigate how climate influences crop selection.</p> <p>Report findings to classroom.</p>	<p>3.RI.1 3.RI.2 3.RI.3 3.SL.1 3.SL.4</p> <p>4.RI.1 4.RI.2</p> <p>5.RI.2 5.SL.1 5.SL.5</p>		3-LS4-3 3-LS4-4 3-ESS2-2	1.5.1 7.5.2
Food Practices and Science	Know how to preserve and process a variety of food crops	Identify various food preservation methods. Identify various food processing methods.	<p>Compare and contrast various food preservation methods.</p> <p>Grow, process, and/or preserve at least one food from the garden. Compare tastes.</p>	<p>Investigate building a solar dehydrator.</p> <p>Report findings to classroom.</p>	<p>3.RI.1 3.RI.2 3.RI.3 3.SL.1 3.SL.4</p> <p>4.RI.1 4.RI.2 4.SL.1</p>		3-5-ETS1-2 3-5-ETS1-1	2.5.6

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
			<p>Create garden products such as pesto, salsa, guacamole, salad dressing, smoothies</p> <p>Design and build a solar dehydrator.</p>		<p>5.RI.2 5.SL.1 5.SL.5</p>			
	Be able to prepare, share and serve healthy, delicious food	Understand a variety of food preparation techniques.	<p>Prepare a healthy snack with foods from the garden and then create a recipe.</p> <p>Use a recipe to create a garden snack.</p> <p>Investigate alternative methods for cooking.</p>	<p>Investigate how climate affects food preparation.</p> <p>Investigate how to build a solar dehydrator.</p> <p>Report findings to classroom.</p>	<p>3.RI.1 3.RI.2 3.SL.1 3.SL.4</p> <p>4.RI.1 4.RI.2 4.SL.1</p> <p>5.RI.2 3.RI.3 5.SL.1 5.SL.5 5.NF.2 (word problem using fractions)</p>	5.NF.2 (word problem using fractions)	<p>3-LS4-3 3-ESS2-2 3-5-ETS1-1 3-5-ETS1-2</p>	<p>2.5.4 8.5.2</p>
	Use best practices to harvest and prepare foods safely	Identify and describe protocol to harvest, clean, and prepare foods from the garden.	<p>Demonstrate use of best practices while harvesting and preparing food, and while cleaning utensils and dishes.</p> <p>Demonstrate “claw method” when cutting produce.</p> <p>Students demonstrate food safety practices by creating a poster or short skit.</p>	<p>5.SL.4 Create multi-media presentation to share findings.</p> <p>Compare and contrast garden systems with other cultural systems.</p> <p>Report findings to classroom</p>	<p>3.SL.1 3.SL.4</p> <p>4.SL.1</p> <p>5.SL.1 5.SL.5</p>		3-5-ETS1-2	<p>1.5.3 2.5.4</p>

Strand	Topic	Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
	Use best practices with food cooking methods		Prepare a single ingredient from the garden in three different ways, e.g.,, poaching, stir fry, roasting.	Investigate how climate influences food cooking methods and alternatives. Report findings to classroom.	3.RI.1 3.RI.2 3.RI.3 4.RI.1 4.RI.2 4.SL.1 5.RI.2 5.SL.1		3-5-ETS1-2 3-LS4-3 3-ESS2-2	