

Nourishment: Feeding Our Mind and Body with What It Needs to Stay Healthy and Flourish
Theme 3: Scope and Sequence - Grades K–8

Strand	Topic	K–2		3–5		6–8	
		Learning Outcomes	Garden Activities	Learning Outcomes	Garden Activities	Learning Outcomes	Garden Activities
Food Culture	Articulate relationships to food through stories and memories	Recognize that different individuals, families, and communities eat different foods.	Keep food journal for one day. Draw or write about what you ate. Make stone soup in fall or winter or friendship fruit salad in spring as a class community. Share your favorite food stories or memories. Invite family or community members to share their food stories.	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 a variety of garden food plants. Map origin and share cultural uses of plants. Invite family members to garden and to share food stories.	Critically evaluate how personal food choices are impacted and influenced by media, culture, community, peers, family and self.	Choose and grow foods in the garden that are important to students, their families, community and culture. Prepare and eat these foods in the garden. Record and share stories about these foods. Examine advertising techniques and find common examples of techniques used to sell food (e.g., cool characters, catchy slogans). Create slogans for food grown in the garden that advertise “nutrition.”
	Understand how food traditions, values and celebrations affect food choices and community food systems	Give examples or identify family and ethnic food traditions.	Conduct a family food interview with family member, friend, etc. Ask questions like, “What does your family traditionally eat?” Share with classmates. Invite family members to share traditions and sample foods.	Describe and compare a variety of food stories from a variety of cultures. Interpret the impact a family food tradition has on food choice and community.	Listen to a variety of food stories from a variety of cultures. 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.	Recognize how values shape eating habits and foods available in the community. Recognize the factors that shape food traditions such as seasonality, scarcity and abundance, and geographical resources.	Describe a food-based tradition in your family or community. Choose and grow foods in the garden that are traditionally important. Prepare and eat these foods in the garden. Record and share traditions about these crops.

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					Harvest, compose a still life and watercolor a cornucopia.		
	Appreciate that food is place-based and that different regions around the world have distinct culinary attributes	Identify which foods grow in Hawai'i. Explain that foods can be categorized in groups based on attributes (i.e. fruits/vegetables).	Conduct a garden walk to identify food plants. Sort and classify garden plants into food groups and identify their origin. Create a word bank of distinctly cultural foods in Hawai'i. Grow at least one food from each culture represented by students.	Explain what culinary cultures are and how they came to be. Give examples of culinary cultures. Explain how/why culinary culture is shaped by the foods grown in that region.	Conduct a survey about the culinary cultures represented by garden students. Grow simple gardens with cultural culinary food plants (e.g., Hawaiian, Filipino, Chinese, European, etc.). Categorize and map the culinary attributes of the cultures represented.	Compare and contrast foods from different locales. Identify distinguishing flavors and characteristics.	Propagate and plant different beds that represent cultural and regional foods in the garden. Compare and contrast how crops from different regions grow in your environment.
	Recognize that foods can promote wellness and deter disease.	What a food plant is and how it nourishes the body. Describe the differences between whole and processed foods such as refined and natural sugars. Explain “close to the source,” and identify foods grown locally.	Define whole and processed foods. Eat a whole and a processed food such as an apple and applesauce. Describe the differences. Visit a farmers' market or produce section at a local grocery store. Create a list of whole and processed foods seen in both locations. Grow and make a healthy snack from the garden. Grow herbs for tea, seasoning, or first-aid. Discuss “close to the source” and identify	Examine the nutritional attributes of cultural culinary habits represented in a classroom. Infer that eating habits and diet choices directly affect physical and mental wellness, and disease prevention.	Identify and describe favorite food plants. Examine `Aina Food Guide. Grow and taste a food from each of the `Aina categories: protective foods, energy foods, body building foods, brain foods, and caution foods. Define “Close to Source” and provide evidence from the garden. Explore the link between nutrient dense foods and good health by evaluating student food logs. Make a poultice with	Connect what is eaten with emotional and physical states. Describe what wellness looks like. Describe the differences between whole and processed foods such as refined and natural sugars. Design a personal plan for daily food choices food that supports long-term health. Recognize the relation between nutrient dense and whole foods.	Taste, prepare, describe, and eat describe fresh foods in the garden. Identify and classify different taste profiles: sweet, sour, bitter, salty, umami. Identify and distinguish the qualities of fresh, whole foods from the garden. Research nutritional values of foods grown in garden and taste them. Compare, contrast and evaluate garden grown with frozen, canned and fresh, store-purchased

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			locally grown foods. * See Appendix: Examine the <i>'Aina Food Guide</i>		comfrey, aloe, etc. and understand how garden products support and promote health.	Explain how time spent in the garden and growing food influences personal food choices.	produce. Explore relationship between exercise and foods eaten. Make herbal teas.
Food Justice and Security	Recognize the social, economic and environmental components of food systems	<p>Explain that foods can be grown in a garden, in a container on a porch, and at a farm. Give examples of foods from each category.</p> <p>Explain that foods are purchased at farmers' markets, harvested from the forest and ocean, and traded with friends/family. Give examples of each category.</p>	<p>Grow a small garden of diverse crops in the ground and in containers.</p> <p>Record number of hours of student work; count and weigh harvest and waste; track number of students fed.</p> <p>Conduct a garden walk to identify food plants.</p> <p>Tour a local farm. Learn and discuss what is needed to bring a food crop from seed to market. Illustrate a simple food system based farm tour experience.</p> <p>Identify and list ways a family or the community acquires food in their region.</p> <p>Use and describe the cycle of how garden compost grows healthy plants.</p> <p>Visit a farmers' market and make a list of the foods sold at the market.</p>	<p>Explain agricultural practices of various culinary cultures represented in a classroom.</p> <p>Connect social, economic, and environment systems to culinary cultures.</p> <p>Design a model that investigates social, economic, and environmental systems within a culture's culinary system.</p> <p>Describe and analyze a simple and complex food system. Compare and contrast a school or home garden, a grocery store, and a farmers' market.</p> <p>Connect farmer's market and grocery store processes to garden grown foods.</p>	<p>Using school garden, farmers' market, and grocery stores:</p> <ul style="list-style-type: none"> Examine agricultural and culinary practices of various cultures represented in classroom. Calculate and analyze garden production from garden logs. Include planting and harvest data, weight and waste, and labor data. Identify patterns and present findings. Identify social, economic and environmental inputs needed to grow plants such as labor, natural, and financial inputs. Compare and contrast a garden task completed by manual labor versus a machine. Formulate questions about scale of production. Identify and model wise use of available and free resources such as compost, 	<p>Relate the components of your local food system.</p> <p>Recognize whole foods, and how and where to obtain them.</p>	<p>Compare and contrast the same food from garden, farmer's market, and grocery store.</p> <p>Compare garden grown foods with pre-packaged foods: Assess how far the foods traveled, the number of people involved in handling, and the economic and environmental impacts. Use all senses to appraise the quality.</p> <p>Calculate and analyze garden production from garden logs. Present findings.</p> <p>Recognize whole foods and identify where to obtain them.</p> <p>Analyze food from various sources including farmer's market, grocery store, and garden for impacts on social, economic and environmental systems.</p>

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			Describe how and where the food comes from. Find examples of foraging and cultivating.		<ul style="list-style-type: none">beneficial insects, etc.Draw a model of various food systems and include energy inputs and outputs.Compare and contrast various inputs in different environments needed to grow plants.		
	Explain the energy inputs and outputs required by food systems	Explain the energy inputs required for a garden system: human energy, sun, etc. Describe or illustrate how plants, animals and people get their energy.		Create a map that depicts energy inputs and outputs for a local food system.		Characterize differences between local and imported food crops. Explain various growing systems in regards to energy inputs and outputs.	Compare and contrast the same food from various sources. Compare garden grown foods with pre-packaged foods: assess how far the foods traveled, the number of people involved in handling, and the economic and environmental impacts. Use all senses to appraise the quality. Calculate and analyze garden production from garden logs. Present findings. Recognize whole foods and identify where to obtain them. Analyze food from various sources including farmer’s market, grocery store, and garden for impacts on social, economic and

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							environmental systems.
	<p>Understand how food systems, food justice, and food security contribute to food access, affordability and distribution.</p> <p>Understand the relationship between advocacy and policy as they relate to food justice and food security.</p>	<p>Explain what people and animals need to survive.</p> <p>Give examples and describe how to acquire foods needed to survive.</p> <p>Explain how to acquire fresh, whole foods.</p>	<p>Conduct a Food Drive & Grow a Row for the Food Basket.</p> <p>Grow food that students can take home to their family.</p> <p>Grow, eat, share, and sell what we eat to understand food security.</p>	<p>Define food justice and injustice.</p> <p>Define food security and insecurity.</p> <p>Identify Hawai'i food systems.</p> <p>Construct an argument about Hawai'i food systems and food security/insecurity.</p>	<p>Identify and examine global and/or local instances of food justice and injustice.</p> <p>Compare and contrast various sources of foods available for consumption such as gardens, food banks, markets, stores, and ocean or forest.</p> <p>Define “food map”; create a food map that represents students’ home/community.</p> <p>Compare and contrast local grown food to imported foods such as local Ka’u oranges vs. Sunkist oranges.</p> <p>Design a barter system where garden resources are identified for exchange with other goods.</p> <p>Identify and give examples of food deserts.</p>	<p>Explain food and food production in terms of abundance, scarcity, and access.</p> <p>Formulate solutions for food insecurity.</p>	<p>Describe a time in which food would be safe to eat and available to feed individuals and community.</p> <p>Cultivate crops that represent food security in your community.</p> <p>Formulate a plan to use food from your school garden to contribute to food justice and security in your community.</p> <p>Explain how action, policy, and advocacy can influence food justice and security.</p>
	<p>Food is a resource: Identify and apply practices that eliminate and redirect food from waste systems</p>	<p>Identify where food waste comes from and goes to.</p> <p>Explain how to store foods.</p> <p>Identify and describe</p>	<p>Investigate what happens to discarded food at school and at home.</p> <p>Learn how and when fruits and vegetables are ripe and ready to eat.</p>	<p>Compare and contrast food waste.</p> <p>Identify practices that produce more or less food waste.</p>	<p>Examine a trashcan after lunch. Identify food waste (i.e. food waste audit).</p> <p>Identify practices that produce food waste.</p>	<p>Explain food waste and Model behaviors that reduce, eliminate, and redirect food from landfill systems.</p>	<p>Using 5 gallon buckets, determine volume and weight of food waste from lunch. Record data. Compare over time.</p> <p>Identify mean, median</p>

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		when to harvest fruits and vegetables.	<p>Weigh and recycle fresh fruit and vegetable scraps from school meals. Collect data and add to the compost pile in the school garden.</p> <p>Create and maintain a garden worm bin.</p> <p>Create a classroom bokashi composting system with 2 buckets. See Appendix KHF Lesson</p>	Identify local landfill systems.	<p>Identify local landfill and wastewater systems.</p> <p>Create a vermiculture system and utilize castings as fertilizer.</p> <p>Incorporate garden snack discards into garden compost system. Layer appropriate ratio of green/brown components.</p> <p>Collect data on volume of food discards in a classroom versus a school wide lunch program.</p> <p>Compare and contrast volume of food discards in a classroom versus a school wide lunch program</p>		<p>and mode of waste, and predict annual totals for school and individual students.</p> <p>Create, implement and evaluate a strategy that generates less food waste in your garden, classroom or cafeteria.</p> <p>Incorporate garden snack discards into garden compost system. Layer with appropriate ratios of nitrogen/carbon.</p> <p>Discuss how discards can become garden inputs connected to garden nutritional cycles.</p>
	Understand the economic value and ecological impact of a crop or product in your region	<p>Explain how one seed can turn into many, or one food can be turned into many different products.</p> <p>Explain how a garden can contribute to a family's economic health.</p>	<p>Plant, nurture, and harvest one bean seed. Describe how a single plant produces multiple seeds. Explain through illustration, journaling, and applying math extensions how one bean seed produces many.</p> <p>Grow one crop for a student farmers' market at school.</p>	Create a model or drawing demonstrating the cycle of a crop or product from seed to store.	<p>Create a model or drawing demonstrating the cycle of a single crop or product (e.g., bananas) from farm to table.</p> <p>Grow that product in the garden.</p> <p>Map local crop production and food sources.</p> <p>Make an agricultural map showing kinds of foods</p>	<p>Explain how gardening yields valuable resources. Do a cost analysis and simple ecological impact assessment of growing a crop in your garden.</p> <p>Describe how individual choice has an impact on the larger food system. Identify ways in which an individual can impact the food systems.</p>	<p>Grow crops to sell at a farm stand.</p> <p>Harvest, record, weigh, set price, and log garden crops.</p> <p>Compare and contrast prices across locations.</p> <p>Identify foods grown in various climate zones in your region.</p>

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			Draw the foods grown in your regional area.		grown in your regional area.		
	Identify, design, and practice techniques that build resilient food systems such as seed saving, encouraging biodiversity, nutrient recycling and water conservation	<p>Describe how home gardening, composting, and seed saving can lead to greater community food security.</p> <p>Identify other ways to promote community food security.</p>	<p>Conduct a Student Survey at the beginning and end of the year to identify fresh food sources at home.</p> <p>Choose and grow one crop to seed; save and replant seeds and/or propagate by division.</p> <p>Increase home food security by sharing seeds, cuttings, slips/hulis.</p> <p>Maintain garden compost and greywater systems in the school garden.</p> <p>Identify names of the pollinators in the school garden and observe the plants they frequent.</p> <p>Introduce the importance of water consumption for humans and plants.</p>	<p>Define “food security,” “food insecurity,” and “food deserts.”</p> <p>Identify practices that can increase food production and access thereby increasing community food security.</p>	<p>Visit a local farm that practices regenerative and sustainable agriculture. Report or illustrate field trip to that farm.</p> <p>Design and build greywater and/or rain catchment systems.</p> <p>Identify wastewater systems in the garden and community.</p> <p>Interview a local 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.</p> <p>Grow and save seed from at least one crop.</p> <p>Define open pollinated, hybrid, and heirloom plants.</p> <p>Research seed histories.</p>	<p>Explain how a biodiverse system is a resilient system.</p> <p>Explain the process and functions to save and safely store seeds.</p>	<p>Conduct a biodiversity survey in your school garden. Observe relationships that indicate resilience or imbalance in your garden system (e.g., aphids and ladybugs).</p> <p>Identify and describe local honey production. Discuss pollination and local food security. Interview a local beekeeper. Identify pollinators in the school garden.</p> <p>Create a design brief for a plant with desirable traits to save seeds from. Save, store, and propagate seed. Conduct interviews with community members to collect and share seed stories.</p>
Food Seasons and Place	Understand how place influences what foods to grow and when to grow them.	Identify, then draw or describe the crops that grow well in your agricultural area.	Propagate, grow, harvest and prepare one food crop in each growing season (fall, winter,	Summarize processes used to grow, process, and consume a crop.	Design and create a garden bed that optimizes seasonal variations and produces	Explain what grows well in your geographic location and how and when to grow specific	Propagate, grow, harvest and prepare at least three food crops during the appropriate season.

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		<p>Explain the environmental differences of fall, winter, and spring.</p> <p>Identify which crops grow well in the school garden and in which season they grow best.</p>	<p>spring).</p> <p>Grow the same crop in all three seasons. Record observations, and compare and contrast data. Explain the differences.</p> <p>Describe seasonal differences in foods produced in garden through tastings and observations in class, school, or community.</p>	<p>Predict availability of crop for consumption based on seasonality.</p> <p>Compare and contrast nutritional value and flavor of foods from the garden and canned foods.</p>	<p>optimal success.</p> <p>Read seed packets and catalogues. Predict what varieties will grow well for your microclimate.</p> <p>Use seasonal produce to preserve, share or consume.</p> <p>Understand the concepts of warm and cool, wet and dry weather crops.</p> <p>Identify and plant according to the season. Identify pests in season.</p> <p>Examine Hawaiian Moon Calendar. Observe seasons for fishing and planting. Sow, propagate, and transplant plant varieties according to moon calendar.</p>	<p>plants.</p> <p>Propagate, grow, harvest, prepare, and consume at least three food crops.</p>	<p>Evaluate school lunches using the concepts of seasonality and geographic source. Describe through mapping the concepts of seasonality and geographic sourcing using the results of the evaluation.</p> <p>Grow, document and evaluate varieties of the same crop. Observe the growth rate and vigor of the varieties.</p> <p>Select successful variety to propagate based on data gathered from growing over successive plantings and selection.</p> <p>Identify and treat for pests in season.</p> <p>Examine Hawaiian Moon Calendar. Observe seasons for fishing and planting. Sow, propagate, and transplant plant varieties according to moon calendar.</p>
	Understand the components of your local food system	<p>Describe how food comes to people. Explain where food comes from. Identify the roles people play in food production.</p>	<p>Identify local food producers such as farmers, fishers, ranchers, bakers, and processors. Visit and interview a local</p>	<p>Describe and compare local and global food systems.</p> <p>Relate farmers' market and grocery store food</p>	<p>Visit and interview a local producer or have a producer visit the classroom. Illustrate or explain what was learned.</p>	<p>Describe and compare local and global food systems.</p> <p>Apply traditional food production and waste</p>	<p>Ask a small farmer, fisher, or rancher to present their business model. Prepare questions about the successes and challenges of their</p>

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			producer or have a producer visit the classroom. Illustrate or explain what was learned.	systems to garden grown foods. Describe the cause/effect of a local and global food system.	Interview farmers at local farmers' markets. Draw and explain the food system model. Compare a grocery store model. Interview an animal farming expert. Create a guide to local farmers' markets.	reclaiming methods to modern food systems.	business. Illustrate the food system they operate within. Design a model to utilize fish or other waste in the garden composting system.
	<p>Know when and how to harvest fresh fruits and vegetables for taste and nutritional value</p> <p>Recognize that growing and eating in season optimizes nutrition and food production while encouraging ecological best practices</p>	<p>Connect ripe fresh foods to optimal nutritional value and taste.</p> <p>Name and draw foods that ripen in each growing season.</p>	<p>Identify various stages of ripeness in produce.</p> <p>Describe the differences between ripe and unripe fruits in terms of flavor.</p> <p>Create a word bank to describe how foods taste, what they look like, and how they feel and smell.</p> <p>Identify and draw foods in season on a monthly calendar in the classroom.</p>	<p>Compare and contrast nutritional value of foods from the garden to canned foods.</p> <p>Compare and contrast taste of foods from the garden to canned foods.</p> <p>Define quality foods.</p>	<p>Compare and contrast taste of foods from the garden to canned, frozen or dried foods.</p> <p>Connect ripe, fresh foods to value and taste.</p> <p>Compare and contrast taste of locally grown versus imported (banana from Hawai'i vs. banana from Ecuador).</p> <p>Create one-word poems using descriptive language about garden experiences.</p> <p>Create a map to illustrate seasonality and availability of local food crops.</p> <p>Track food miles of a crop that is imported to eat out of season. Describe consequences of eating out of season, imported foods.</p>	<p>Recognize that growing and eating in season optimizes nutrition and food production while encouraging ecological best practices.</p> <p>Recite the macronutrients in food.</p> <p>Know the roles of macronutrients in body processes.</p>	<p>Know crops in the garden that contain key macronutrients. Research how nutritional values change over time post-harvest. Observe and chart changes in color and taste in the crops post-harvest over time.</p> <p>Plant and make seasonal herbal teas. Research and record nutritional values of herbs grown in garden. Taste and evaluate them.</p> <p>Plant seasonally sensitive crops several times throughout the school year. Compare and contrast plant health vigor, production and taste (e.g., tomato, beans, corn, lettuce, radishes, spinach).</p>

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Food and Nourishment	<p>Know how to obtain information about food from a variety of sources to make informed food choices.</p> <p>Use nutrition labels, product packaging, cultural history, food stories, indigenous knowledge and practices to shape and inform food choices.</p>	<p>Describe healthy food choices.</p>	<p>Learn the names of garden plants and create signage.</p> <p>Identify differences between whole and processed foods.</p> <p>Learn to read food labels.</p>	<p>Describe foods as defined by various media representations.</p> <p>Compare and contrast media food representations with foods grown in the garden.</p>	<p>Use <i>‘Aina Food Guide</i> to classify and label garden crops.</p> <p>Describe various media representations of foods (e.g., commercials, magazines, store shelves).</p> <p>Compare and contrast representations with actual food grown in the garden.</p> <p>Practice reading food labels. Discuss and classify whole and</p>	<p>Explain how food product information is used to discern choices that support health.</p> <p>Identify different sources for information about food.</p>	<p>Compare garden grown foods with pre-packaged foods.</p> <p>Understand the role of bias of advertising on our food choices.</p> <p><i>* See Appendix: ‘Aina in Schools Guide: Marketing 101</i></p>

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					<p>processed foods.</p> <p>Identify and discuss food labeling and marketing strategies. Define natural, healthy, processed, unprocessed, and organic.</p> <p>Students create an advertisement for a fresh fruit or vegetable.</p>		
	Understand the benefits of a nutritionally balanced and diverse diet	<p>Explain that food provides energy and nutrients for our bodies.</p> <p>Describe how food choice is connected to health.</p>	<p>Identify whole foods that are different colors and discuss their benefits.</p> <p>Grow, harvest and eat from a rainbow garden.</p> <p>Grow and eat from an ‘AINA food garden.</p> <p><i>* See Appendix: My Eat Local Hawai‘i Plate</i></p> <p>Discuss diversity in the diet.</p> <p>Make healthy snacks from foods bought or grown in the garden. Create healthy snack recipes and a classroom cookbook for families.</p> <p>Model “sip and swallow” to show that people, like plants, need water.</p>	<p>Identify a variety of different colored foods from the garden.</p> <p>Describe the nutritional benefits of foods from the garden.</p> <p>Design a seasonal and nutritionally balanced diet.</p> <p>Identify nutritional attributes provided by different colored foods.</p> <p>Define macro and micronutrients. Explain how micro and macronutrients benefit the body.</p>	<p>Identify nutritional attributes provided by different colored foods.</p> <p>Create and taste a variety of drinks made from garden ingredients. Assess the nutritional components.</p> <p>Design a restaurant menu that changes seasonally and serves healthy sized servings.</p> <p>In the garden, conduct a side-by-side experiment with an energy drink or soda and water: feed garden plants only water, soda, and/or a sports drink. Record observations.</p> <p>Investigate <i>My Eat Local Hawai‘i Plate</i>.</p> <p>Introduce <i>“Rethink Your</i></p>	<p>Incorporate and apply health expressions into meaningful daily discourse about the benefits of a balanced, diverse diet.</p>	<p>Identify and taste a variety of different colored foods. Explain the role phytonutrients playing a healthy diet.</p> <p>Prepare a snack or meal from the garden that exemplifies a health slogan such as “eat a rainbow.”</p> <p>Participate in a nutrition workshop by a health-care practitioner.</p> <p>Incorporate and apply health expressions into common conversation about the benefits of a balanced, diverse diet.</p> <p>In the garden, conduct a side-by-side experiment with an energy drink or soda and water; feed garden plants only water, soda, and/or a sports</p>

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					<i>Drink HI”</i> Whole Kids Foundation		drink. Record observations.
	Understand the relationship between healthy soil, healthy food, and healthy people.	<p>Explain how healthy soils produce healthy plants.</p> <p>Explain how healthy plants are part of a healthy diet.</p>	<p>Draw a plant and its parts. Describe how the roots get nutrition from the soil.</p> <p>Sing the song, “Dirt Made My Lunch”</p> <p>Amend garden soil with compost and other amendments. Describe why amending the soil is necessary.</p> <p>Harvest food from the garden and eat. Follow established food handling guidelines for eating from the garden.</p> <p><i>* See Appendix: “Dirt Made My Lunch.”</i></p>	<p>Draw a diagram illustrating the Soil/Plant Nutrition Cycle.</p> <p>Explain macro and micronutrients.</p> <p>Describe how plant-growing processes produce plants that are high or low in micronutrients.</p> <p>Explain how human bodies acquire macro and micronutrients.</p>	<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. Prepare and share the snack.</p> <p>Explain through illustration how healthy soils produce healthy crops and good nutrition.</p>	<p>Explain the meaning of <i>Mālama i ka ‘Āina</i> or “feed the soil and the soil feeds you.”</p> <p>Describe how <i>Mālama i ka ‘Āina</i> relates to macronutrients, micronutrients, and microbes.</p> <p>Describe the human microbiome and the relationship between a well fed soil, well fed plants, and well fed people.</p>	<p>Apply amendments to the soil that enrich plants and improve nutrient values.</p> <p>Prepare planting beds with and without soil amendments and compost. Plant the same crop in each bed at the same time.</p> <p>Compare and contrast the crops from the two beds, focusing on production, plant health, physical appearance etc. Make inferences about how those crops would impact a person’s body.</p>
	Understand that nutrients in food are assimilated into the human body.	Describe how food provides energy and nutrients for humans.		<p>Explain the human digestive process in terms of breaking down of matter to acquire energy and nutrients.</p> <p>Identify, describe and compare a similar process such as composting and soil preparation.</p>	<p>Observe decomposition in the compost pile.</p> <p>Relate the observation to the human digestive process.</p> <p>List plant nutrient needs and human nutrient needs. Draw conclusions.</p>	<p>Explain how human cells use sugars to make energy (ATP).</p> <p>Explain how nutrients in food are assimilated into the body and used for physical movement as in cellular respiration. Describe cellular respiration.</p>	<p>Explain the human digestive process in terms of breaking down of matter to acquire energy and nutrients.</p> <p>Identify, describe and compare a similar process such as composting and soil preparation.</p>

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	<p>Appreciate a wide variety of food smells, tastes and textures.</p> <p>Understand a correlation between flavor and nutritional attributes.</p>	Describe new flavors by tasting a variety of familiar and unfamiliar foods.	Discuss and describe taste sensations sweetness, sourness, saltiness, bitterness, and umami. Give examples of foods that have each taste sensation.	Distinguish between a variety of herbs grown in the garden.	Taste a variety of herbs describe their flavors and name the herb.	Identify sweet, sour, salty, and bitter, and umami taste sensations.	Sample a variety of plants from the garden and categorize their flavors.
		Identify sweet, sour, salty, bitter, and umami sensations.	Taste fresh foods from the garden. Describe the flavors found in the garden.	Identify plant and culinary uses. Describe flavor.	Taste herbs throughout the year. Identify and describe how plant flavor changes due to seasonality and stage of plant cycle.	Recognize and appreciate that foods provide different flavors and nutritional attributes.	Select foods from the garden and describe a variety flavors.
Safe Food Preparation	Understand how to process and preserve food crops	Attribute flavors to certain foods.	Create a food journal. Describe and record flavors of foods grown in the garden.	Explain how growing methods, seasonality, and uses in food preparation affect the taste of herbs.	Identify and describe flavor sensations sweet, sour, salty, bitter and umami of plants in the garden. Chart and categorize results.		Apply flavor vocabulary sweet, sour, salty, bitter, and umami.
					Compare and contrast foods prepared with and without herbs.		Prepare snacks or a meal from the garden that includes all taste sensations. Describe and assess the balance of flavors in dishes. Suggest improvements.
		Describe how to process foods using a variety of methods such as pickling with salt or vinegar, drying, and preserving with sugar.	Grow, process, and preserve one food from the garden such as drying for tea, preserving fruit in sugar.	Identify various methods of preserving food.	Compare and contrast various food preservation methods.	Process and preserve a variety of food crops.	Prepare garden foods for immediate consumption and long-term storage using traditional and modern methods (e.g., preparing poi, cooking stir-fry, fermentation, drying, salting, and canning).
		Explain how preserving methods prevent spoilage.	Create a list of vegetables and fruits and attribute preserving methods (e.g., corn can be dried, canned, frozen, and eaten fresh).	Explain how preserving methods prevent spoilage and extend use of products.	Grow, process and/or preserve at least one food from the garden. Compare preservation methods and resulting tastes of methods.	Decipher implications of additives and preservatives on health.	Design and build a solar oven.
			Process garden foods to create products such as pesto, salsa, guacamole, salad dressing, and smoothies.	Describe various food preservation methods.	Create products from the garden such as pesto, salsa, guacamole, salad dressing, and smoothies.		
				Describe the differences of one food that has been pickled, canned, dehydrated, frozen, and/or packaged.	Design and build a solar dehydrator.		

Strand	Topic	K–2		3–5		6–8	
		Learning Outcomes	Garden Activities	Learning Outcomes	Garden Activities	Learning Outcomes	Garden Activities
	Understand how to prepare and serve healthy, delicious food	Apply knowledge and skills to prepare and serve food grown in the garden.	Create snacks for the classroom such as lettuce wraps, summer rolls, smoothies and salads, using ingredients from the garden. Use age appropriate methods and tools for food preparation.	Explain or demonstrate a variety of food preparation techniques such as fermentation, canning, freezing, dehydrating, pickling, etc. Demonstrate knowledge and skills to prepare a plant-based snack using foods grown in the garden.	Create recipes and prepare snacks using foods from the garden. Assess and revise recipes. Distribute recipe books. Investigate a variety of processing methods including but not limited to cooking, canning, dehydrating, pickling, fermenting, and preserving.	Explain or demonstrate a variety of food preparation techniques such as fermentation, canning, freezing, dehydrating, pickling, steaming, roasting, poaching. Demonstrate knowledge and skills to prepare a plant-based snack using foods grown in the garden. Explain how cooking food can impact macro and micronutrients.	Select a single ingredient from the garden and prepare it using three different methods such as poaching, steaming, roasting. Discuss and record differences. Harvest, clean, process, present and distribute foods grown in the garden. Package, label and share preserved garden food with community (e.g., <i>Ai Pono</i> , <i>Hokulea</i>).
	Understand how to Identify and use best practices to safely harvest and prepare foods	Recall ways to safely handle and prepare food grown in the garden such as hand washing, fruit and vegetable washing, safe use of tools, and proper consuming practices. Best practices School Garden Food Safety Poster .	Models good food safety procedures for harvesting, washing, cutting and preparing fresh foods.	Describe and demonstrate best practices to safely harvest, clean, and prepare foods from the garden. Explain how best practices are connected to food safety in the garden and kitchen.	Identify and explain best practices while harvesting and preparing food, and cleaning utensils and dishes. Demonstrate pinch and claw grips for knife use. Students demonstrate food safety practices by creating a poster or short skit using <i>The School Garden Safety Poster</i> . Knife Handling: Pinch and Claw Grips	Describe best practices to safely harvest, clean, and prepare foods from the garden. Explain how best practices are connected to food safety in the garden and kitchen. Demonstrate the ability to work in the garden and kitchen in a manner that reduces/eliminates personal injury and contamination.	Safely harvest and prepare foods using best practices including knife safety, proper hand washing and food washing, clean harvest tubs, and kitchen set up. Explain how food borne illnesses occur and spread. Knife Handling: Pinch and Claw Grips