

**Nourishment: Feeding Our Mind and Body with What It Needs to Stay Healthy and Flourish**  
 Theme 3: Curriculum Map – Grades 6–8

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	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 crops.  Examine advertising techniques, find common examples. Create slogans for healthy garden foods.			CCSS: 6.NS.1		2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.8.5
	Understand and define food traditions and celebrations and how they affect food choices and community food systems	Recognize how values shape eating habits and foods available in the community.  Recognize the factors that shape food traditions (e.g., seasonality, scarcity and abundance, geographical resources).	Describe a food-based tradition in your family. <ul style="list-style-type: none"> <li>Choose and grow foods in the garden that are traditionally important.</li> <li>Prepare and eat these foods from the garden.</li> <li>Record and share traditions about these crops.</li> </ul>					2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.8.5
	Appreciate that food is place-based and that different regions around the world have distinct culinary attributes	Compare and contrast foods from different locales. Identify distinguishing flavors and characteristics.	Propagate and plant different beds that represent cultural and regional foods in your garden  Compare and contrast how crops from different regions grow in your environment.					2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.8.5

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	Recognize quality foods and understand relationships between food and physical/mental wellness, and disease prevention.	Connect what is eaten with emotional and physical states. Describe what wellness looks like. Choose healthy options daily that connect to long-term health. Recognize quality foods.	<p>Discuss how time spent in the garden influences students' food choices.</p> <p>Taste and eat fresh foods from the garden; recognize the qualities of fresh, healthy food.</p> <p>Try and describe fresh foods in the garden to expand the palate. Identify different taste profiles: sweet, sour, bitter, salty, umami</p> <p>Compare, contrast and evaluate garden-grown with frozen, canned and fresh, store-purchased produce.</p> <p>Dialogue about diabetes, heart disease etc., followed by a walk (lowers glycemic index) and preparation of a healthy snack.</p> <p>Make herbal teas. Research nutritional values of foods grown in the garden and taste them!</p>	<p>Create a food and mood log.</p> <p><i>* See Appendix: 'Āina in Schools' "Body Talk Hunger Scale."</i></p>	CCSS: W.10		MS-LS1-8	2.8.7, 2.8.8, 2.8.9, 7.8.1, 7.8.2, 7.8.3
Food Justice & Security	Understand the social, economic, and environmental components of food systems	Understand the components of your local food system. Recognize quality foods and where to obtain them.						

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	Explain the energy inputs and outputs required by food systems	Characterize differences between local and imported food crops and various growing systems in regards to energy inputs and outputs.	<p>Compare and contrast the same food from various sources.</p> <p>Compare garden grown foods with pre-packaged foods.</p> <p>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 (e.g., taste, appearance, smell etc.).</p> <p>Using garden logs, calculate and analyze garden production from garden logs. Present findings.</p> <p>Recognize quality foods and identify where to obtain them.</p> <p>Analyze food from various sources including farmers' market, grocery store, and garden for impacts on social, economic and environmental systems.</p> <p><i>*See Appendix:</i> Film: <b>Food Chains</b> (explores social impact of ag).</p>					3.8.1, 3.8.3, 5.8.1, 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6, 5.8.7
	Understand how food systems, food justice, and food security	Understand abundance, scarcity and access to quality	Describe a safe, secure time (in relation to food).	Read a story about a community/individuals who experience food	CCSS: W.10			1.8.1, 1.8.2, 1.8.3, 8.8.1, 8.8.2, 8.8.3

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	<p>contribute to food access, affordability and distribution.</p> <p>Understand the relationship between advocacy and policy as they relate to food</p>	<p>foods.</p> <p>Advocate for food security.</p>	<p>Cultivate crops that represent food security in your community.</p> <p>Construct a plan to use food from your school garden to contribute to food justice and security in your community. (eg.grow 1 bed for the food basket, or distribute some produce to the elderly).</p> <p>Advocate for food justice and security. (grow, teach distribute, etc.)</p>	<p>insecurity and food injustice. Write a response in a journal and share thoughts with peers.</p> <p>Discuss and debate food labeling, food origin, etc.</p> <p>Create a public Service Announcement</p> <p>Identify imported and local ingredients in school food service.</p> <p><i>* See Appendix: Center for Ecoliteracy, <u>Nourish</u>, “School Food Audit”</i></p>	<p>SL.1.c, SL.4, SL.5</p> <p>L.1.a L.3 L.4,</p>			
	<p>Understand that discarded food is a valuable resource. Identify and apply practices that eliminate and/or redirect discarded food from landfill systems.</p>	<p>Develop awareness of food waste and reinforce routines that eliminate and/or redirect food from landfill systems.</p>	<p>Using 5 gallon buckets, determine volume and weight, and record food waste from lunch. Make comparisons over time. Identify mean, median and mode of waste, and annual totals for school and individual students.</p> <p>Create a strategy (e.g., taking smaller portions) and a system to generate less food waste in your garden, classroom or cafeteria. (e.g., using food waste as animal food, vermicompost, Effective Microorgaisms, or in compost piles in the garden).</p>	<p>Identify ways of sharing leftovers and excess produce with community organizations that support food security (e.g., The Food Basket).</p>	<p>CCSS: SL.1 SL4</p>	<p><a href="#">6.SP.B.5.A</a></p> <p><a href="#">6.SP.B.5.B</a></p> <p><a href="#">6.SP.B.5.C</a></p> <p><a href="#">6.SP.B.5.D</a></p> <p><a href="#">8.G.C.9</a></p>		

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			<p>Incorporate garden snack discards into garden compost system. Layer with appropriate amounts of nitrogen/carbon.</p> <p>Discuss how discards can become garden inputs. Connect to garden nutritional cycles.</p>					
	Understand the economic value and ecological impact of a crop or product in your region.	<p>Appreciate that gardening yields valuable resources.</p> <p>Do a cost analysis and simple ecological impact assessment of growing a crop in your garden.</p> <p>Know that individual choice has an impact on the larger food system. (Vote with dollars and actions.)</p>	<p>Grow crops to sell at a farm stand.</p> <p>Harvest, record, weigh and log garden crops. Compare and contrast prices across locations.</p> <p>Identify foods grown in various climate zones in your region.</p>	<p>Form a pen pal relationship between students in different regions to discuss food costs and locally grown foods.</p> <p>Understand the economic and ecological values of choosing locally grown foods by calculating Google miles.</p>		<a href="#">6.RP.A.2</a> <a href="#">7.RP.A.1</a>	<p>MS-ETS1-1</p> <p>MS-ETS1-2</p>	
	Identify, design, and practice techniques that build resilient food systems (e.g., seed saving, encouraging biodiversity, nutrient recycling and water conservation).	Recognize that a biodiverse system is a resilient system.	<p>Conduct a biodiversity survey in your school garden. Observe relationships which indicate resilience or imbalance in your garden system.(e.g., aphids and ladybugs)</p> <p><b>*See Appendix: Bioblitz Survey</b></p> <p>Recognize and describe local honey production. Discuss pollination and local food security. Learn about bees from local beekeeper. Identify</p>	Compare and contrast various economic systems using garden produce.			<p>MS-LS4-4</p> <p>MS-LS2-2</p>	

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		Know the process and functions to save and safely store seeds.	<p>pollinators in school garden.</p> <p>Select a plant with desirable traits to save seeds from. Save, store, and propagate seed.</p> <p>Conduct interviews with community members to create seed stories. Collect and share seed stories.</p>					
Food Seasons and Place	Know what grows well in your place and how and when to grow it.	Know what grows well in your place and how and when to grow it.	<p>Propagate, grow, harvest and prepare at least three food crops during the appropriate season.</p> <p>Evaluate school lunches using the concepts of seasonality and geographic source.</p> <p>Grow, document and evaluate varieties of the same crop. Observe the growth rate and vigor of the varieties.</p> <p>Select a successful variety to propagate based on data gathered from growing over successive plantings and selection. Identify and treat for pests in season</p> <p>Examine Hawaiian Moon Calendar. Observe seasons for fishing and planting.</p>			<p><a href="#">6.SP.B.4</a></p> <p><a href="#">6.SP.B.5.A</a></p> <p><a href="#">6.SP.B.5.B</a></p> <p><a href="#">6.SP.B.5.C</a></p> <p><a href="#">6.SP.B.5.D</a></p> <p><a href="#">7.SP.A.1</a></p> <p><a href="#">7.SP.A.2</a></p> <p><a href="#">7.SP.B.3</a></p> <p><a href="#">7.SP.B.4</a></p> <p><a href="#">8.SP.A.1</a></p>	<p>MS-LS2-1</p> <p>MS-LS2-3</p>	

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			Plant in the garden according to moon calendar.					
	Understand the components of your local food system.		Utilize the fish waste in the garden composting system.  Host a small farmer, fisherman or rancher and have them present about their business model.  <i>* See Appendix: Nourishlife.org: Local Food Systems Diagram</i>	Create a fish print  Research where school lunch food comes from.	CCSS: 6.RP.3.8  W.7.8 W.8  RI.1		MS-LS1-7  MS-LS1-8	
	Know when to harvest for optimal nutritional value, taste and presentation.  Recognize that eating in season provides quality foods and optimal nutrition, and encourages ecological best practices	Recognize that growing and eating in season optimizes nutrition and food production while encouraging ecological best practices.  Recite the macronutrients in food. (Carbohydrates, fats, protein, fiber, water)  Know the roles of macronutrients in body processes.	Know crops in the garden that contain key macronutrients such as calcium.  Research how nutritional values change over time post-harvest. Observe and chart changes in color and taste in the crops post-harvest over time.  Plant and make seasonal herbal teas. Research and record nutritional values of herbs grown in garden. Taste and evaluate them.  Plant seasonally sensitive crops at several times throughout the school year. Compare and contrast plant health vigor, production and					

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			taste (e.g., tomato, beans, corn, lettuce, radishes, spinach).					
Food and Nourishment	<p>Know how to obtain information about food from a variety of sources to make informed food choices</p> <p>(e.g.,, nutrition labels, product packaging, cultural history, food stories, indigenous knowledge and practices)</p>	<p>Use food product information to discern (healthy) choices.(e.g., labels)</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>	<p>Design and create logos, slogans and simple songs for the garden and its products.</p> <p>Use both primary and secondary sources to find out information about a food or crop, (e.g., book, farmer, kupuna/elder, nutrition label).</p>	<p>CCSS: SL.1 SL.4</p> <p>L.3 L.4 L.5.c L.6</p>			
	<p>Know the benefits of a nutritionally balanced and diverse diet.e</p>	<p>Incorporate and apply health expressions into meaningful daily discourse about the benefits of a balanced, diverse diet.</p> <p><i>* See Appendix: Eat a Rainbow, Rethink Your Drink, My Eat Local Hawai'i Plate</i></p>	<p>Identify and taste a variety of different colored foods and understand the role of phytonutrients in a healthy diet.</p> <p>Prepare a snack or meal from the garden that exemplifies a health slogan.</p> <p>Incorporate and apply health expressions into common conversation about the benefits of a balanced, diverse diet.</p> <p>Conduct a side-by-side experiment with an energy drink or soda and water.</p> <p>Participate in a nutrition workshop by a health-care practitioner.</p>	<p>Design a poster illustrating a common slogan.</p>				



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	Understand the relationships between healthy soil, healthy food, and healthy people.	<p>Use the Slogan “Feed the soil and the soil feeds you!” or “<i>Mālama i ka ‘Āina...</i>” as it pertains to macronutrients and microbes.</p> <p>Understand that there is a biome in the human gut.</p> <p>(Recognize the relationship between feeding the soil, the soil feeding the plants, and the plants feeding people)</p>	<p>Apply amendments to the soil that enrich plants and improve nutrient values (e.g., egg shells add calcium to soil, calcium important for bone health).</p> <p>Prepare planting beds with and without soil amendments and compost. Plant the same crop in each bed at the same time. 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>			<p>All <a href="#">6.SP</a> could be connected to the “Compare and contrast” component.</p> <p><a href="#">7.SP.B.3</a></p>	<p>MS-LS1-5</p> <p>MS-LS2-3</p>	
	<p>Understand that nutrients in food are assimilated into the human body.</p> <p>(This is a topic for discussion in the garden.)</p>	<p>Know that cells use sugars to make energy (ATP), how nutrients in food are assimilated into the body and used for physical movement (cellular respiration).</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>Design a shredder that breaks down plants.</p> <p>Plants build the sugars up, and humans break them down.</p>				
	Expand palate through tasting a variety of foods providing different flavors and nutritional attributes.	<p>Eat a variety of foods. Recognize and appreciate that foods provide different flavors and nutritional attributes.</p>	<p>Sample a variety of plants from the garden and categorize their flavors.</p> <p>Discuss the different flavors and apply the vocabulary (e.g., sweet, sour, salty/savory, bitter, umami).</p>				LS1-8	

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			Select foods from the garden that appeal to various flavor profiles (e.g., salad with bitter, sweet, spicy profiles). Prepare healthy, balanced foods from the garden that appeal to various flavor profiles.					
Safe Food Preparation	Know how to preserve and process a variety of food crops	Preserve and process a variety of food crops.  Decipher implications of additives and preservatives on health.	Prepare garden foods for immediate consumption and long term storage (e.g., preparing poi, cooking stir fry, pickling, fermenting, canning).  Design and build a solar oven.				MS-PS1-1	
	Understand how to prepare and serve healthy, delicious food	Know how to prepare foods from the garden using safe protocols to harvest, prepare and share them.  Experiment with different methods of preparing foods, (boiling, baking, dehydrating, solar cooking, etc.)  Understand how cooking foods impacts health and nutrition.	Prepare a single ingredient from the garden in 3 different ways (e.g., poaching, stir fry, roasting).  Harvest, clean, process, present and distribute foods grown in the garden.  Package, label and share preserved garden food with community (e.g., 'Ai Pono, Hokulea)		CCSS: SL.4 SL.5  6.RP.3 6.NS.1			

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	Identify and employ best practices to safely harvest and prepare foods	<p>Identify and employ best practices to safely harvest and prepare foods.</p> <p>Know how to prepare foods from the garden using safe protocols to harvest, prepare and share them.</p>	<p>Safely harvest and prepare foods using best practices (e.g., knife safety, proper washing of foods, washing of hands, clean harvesting tubs).</p> <p>Demonstrate the ability to work with crops and foods using best practices in a manner that reduces/eliminates personal injury and contamination.)</p> <p><i>* See Appendix: The HISGN Garden Food Handling Safety Poster</i></p>	Have students create a food and garden safety video.			<p>MS-PS2-1</p> <p>MS-PS3-5</p>	7.8.1, 7.8.2. 7.8.3

\*(Every garden should have food safety poster and checklist informed by- Good Agriculture Practice GAP). **Food Safety poster available from Hawaii Island School Garden Network**