

A Sense of Place: Sustainable Living Is Rooted in a Deep Knowledge of Place and Self
 Theme 1: Curriculum Map – Grades 6–8

Strand	Topic	6–8 Learning Outcomes	Garden Activities	Classroom Extensions	Common Core-ELA	Common Core- Math	NGSS	NHES
Weather and Seasons	Names and patterns for local and regional weather	<p>Demonstrate your knowledge of regional weather from an ecological and cultural perspective by using correct names and terminology to describe or explain regional weather.</p> <p>Use the Hawaiian names and be able to tell mo'olelo (stories) <i>and</i> recite oli (chants) for different weather patterns and phenomena including vog, winds, rains and cloud formations.</p> <p>Use observations about weather and seasons to make decisions regarding best garden practices (e.g., proper planting and harvesting times).</p>	<p>Regularly record quantitative and qualitative weather observations (wind speed and direction, rain, temperature)</p> <p>Make inferences and predictions about local weather patterns based on data.</p> <p>Develop a testable question based on local weather patterns and data such as how does air temperature relate to humidity</p> <p>Compare and contrast with knowledge gained from stories and chants. (e.g., relationship between rain and Lehua or Wiliwili tree and sharks)</p>	<p>Create spreadsheets and graphs from data sets collected in garden.</p> <p>Using data sets, compare and contrast weather patterns (over time, across the state, etc.)</p> <p>Read text on the causes of weather patterns. Design a model illustrating the movement of cold and warm air masses and how they affect weather.</p> <p>Review evidence on climate change. Create an argument for or against it.</p>	<p>CCSS: W.10, W.8</p> <p>CCSS: S.L.1, L.1.a, L.3, L.4, L.5.c, L.6,</p> <p>CCSS: S.L.1, L.1.a, L.3, L.4, L.5.c, L.6,</p>	<p><u>6.SP.A.1:</u> <i>Testable question</i></p> <p><u>7.SP.C.5:</u> <i>Discuss how chance of rain is quantified and how this translates to the meaning of the words “likely”, “unlikely”, etc.</i></p> <p><u>8.SP.A.1:</u> <i>Make scatterplots to consider possibilities of correlation between two sets of collected data.</i></p>	<p>MS-ESS2-5</p> <p>MS-ESS2-6</p>	
	Seasons and place	<p>Explain local and global seasonal patterns, including solstice and equinox.</p> <p>Explain the relationship of day and night with wind and weather patterns.</p>	<p>Observe and record the sun’s movement over time using a sunstick/dial. Make particular note of Solstice and Equinox. Model the relationship between Sun and Earth to show how seasons are caused.</p> <p>Based on garden data log and observations, develop logical</p>	<p>Describe the forces and methods of heat transfer that cause wind, thermal patterns and ocean currents.</p>	<p>CCSS: W.7, W.10, S.L.1, L.3, L.4, L.6</p> <p>CCSS: S.L.1, L.3, L.4, L.6</p>		<p>MS-ESS1-1</p> <p>MS-ESS2-6</p>	

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			management tasks.(e.g., weeding and mulching, applying soil amendments)					
	The lunar cycle	<p>Know how to use the Hawaiian Moon Calendar as a reference and use it to inform garden activities.</p> <p>Demonstrate the relationship between sun, moon, and earth that creates lunar phases and eclipses.</p>	<p>Observe and record the moon's movement over time. Model the relationship between sun, earth and moon to show how phases and eclipses are caused.</p> <p>Plant, prune, propagate and harvest according to the Hawaiian Moon Calendar.</p> <p>Learn and use Hawaiian Moon phase chant. <i>Mele Helu Pō</i>.</p>	Using traditional texts, evaluate how the Hawaiian Moon Calendar influences farming and fishing practices.	<p>CCSS: W.7 W.10, S.L.1, L.3, L.4, L.6</p> <p>CCSS: RI.1, RI.2, RI.4, L.1.a, L.3, L.4, L.6, SL.1, SL.4, W.7, W.8, W.10</p>		<p>MS-ESS1-1</p> <p>MS-ESS2-6</p>	
Names, stories, and history of place	Local and regional place names	<p>Reference your garden within your ah system.</p> <p>Using a map, analyze place names within an ahupua'a and their relationship to culture and landscape, including the school garden.</p>	Recognize and identify resources in your garden and characteristics or traits that it may have based on your understanding of that landscape informed by knowledge of ahupua'a, place names, and mo'olelo.	Locate the garden on a map and state what resources are available based on your location within the ahupua'a.	CCSS: SL.1, SL.4, L.3, L.4, L.5, L.6			
	Relationship of self to place	Cite specific evidence to explain how you have impacted this place and this place has impacted you.	Draw a picture, write a poem, tell a story, sing a song, perform a dance, or chant that symbolizes your relationship to your garden or the 'āina	Significance/story of name	CCSS: SL.1, SL.4, RL.4, RL.5, RL.6, RL.7		ESS3-4	

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			(land).					
	Local legends and stories	Present a minimum of two local mo'olelo (stories or legends) to an audience.	Recite, chant or illustrate a minimum of two local stories or legends	Compare and contrast different legends and stories with a planting activity (e.g., Hāloa/ kalo and goddess/corn).	CCSS: SL.1, SL.4, RL.4, RL.5, RL.6, RL.7			
	Local agricultural history, practices, plants, and people	Describe how cultural and ecological resources have shaped local land use. Describe how human activity has impacted local agricultural resources. Propagate and plant Polynesian introduced, indigenous, and endemic plants from your region.	Walk or hike within your ahupua'a and identify agricultural resources and current land uses. Identify, propagate, grow and use indigenous and endemic plants from your region (e.g., cordage)	Use Google Maps to identify topography resources and land use of your region. Conduct an oral history interview with longstanding farmers and practitioners in your community and share with an audience.	CCSS: RI.2, RI.4, SL.4, L.3, L.4, L.6 CCSS: RI.2, RI.4, SL.4, L.3, L.4, L.6		MS-LS4-2 MS-LS4-4	
Geography & Directionality	Directionality and orientation	Know the cardinal directions and where the celestial bodies rise and set. Point towards 'ākau, hema, hikina, komohana (north, south, east, west).	From your garden be able to identify the cardinal directions and be able to locate major geographical features using cardinal directions. Point and trace the sun's path in the garden; predict seasonal changes. At any given location, be able to turn and face your body towards "your personal home."	Design garden map based on geographic weather knowledge and growing zones (e.g., structures, slopes, trees, wind)	CCSS: SL.1, L.3, L.4, L.6	7.G.A.1: <i>Garden map to scale</i>	MS-ESS1-1	

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	Major geographical features	<p>Name and identify important geographical features that are pertinent to your garden classroom using both Hawaiian and English names. Locate the garden on a map using latitude and longitude.</p> <p>Compare and contrast what can be seen from the garden with major geographical features on a map.</p> <p>Create a map of the garden, including major geographical features and a compass rose.</p>	<p>From your garden be able to find and name major geographical features that impact your region.</p> <p>In your garden identify organisms' response to geographical features (e.g., tree growth impacted by wind patterns resulting from geographical features).</p> <p>Locate the garden on a map using latitude and longitude.</p> <p>Map garden areas indicating what areas of the garden space would be best for specific uses (e.g., windbreak, crop area, fruit tree orchard, nursery).</p>	<p>Research how ancient Hawaiians lived and utilized the land in your region based on its geographical features.</p> <p>Create a map of the garden, including major geographical features and a compass rose.</p>	<p>CCSS: SL.1, L.1.a, L.3, L.4, L.6</p> <p>CCSS: SL.1, L.1.a, L.3, L.4, L.6</p> <p>CCSS: SL.1, L.3, L.4, L.6</p> <p>CCSS: SL.1, L.1.a, L.3, L.4, L.6</p>			
Values	Relationship of family to this place	Demonstrate an understanding of the interrelationship between the health of the land and natural resources with the health of the community and families in it.	Research the history of the school community regarding land use.	<p>Conduct oral histories of your family members, or longstanding farmers and practitioners in your community regarding land use and practices.</p> <p>Analyze health data and land use for the community and evaluate trends.</p>				<p>2.8.1</p> <p>2.8.2</p>
	School values	Incorporate school values into the garden.	Incorporate school values into garden practices. Identify how the school values are reflected in garden					

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			work and activities.					
	Hawaiian values	<p>Apply the principles and practices of aloha ‘āina, mālama ‘āina, kuleana, lōkahi, etc. in the garden on a regular basis.</p> <p>Appraise the impact of practicing these values regularly on self, garden, and community.</p>	Use the language and values of aloha ‘āina, mālama ‘āina, kuleana, lōkahi, etc. to inform daily garden practices and activities.	<p>Research in <i>Hawaiian Planters</i>, and <i>‘Ōlelo No’Eau</i></p> <p>Describe how the kapu system affected resource distribution and populations (plant, animal, and human) over time.</p> <p>Cite evidence about the kapu system as a source of resource management.</p>	<p>CCSS: SL.1, SL.1.c, L.1.a, L.3, L.4, L.6</p> <p>CCSS: SL.1, SL.1.c, SL.1.d, SL.2, SL.4, L.1.a, L.3, L.4, L.6</p>			<p>2.8.2</p> <p>2.8.8</p>
	Best practices	<p>Respect and adhere to codes of conduct for your garden classroom.</p> <p>Understand the consequences of personal actions in the garden.</p> <p>Keep garden records.</p>	<p>Create a garden protocol and daily ritual for all classes in the garden.</p> <p>Create and follow garden agreements; make signage of garden agreements Keep a daily log to collect real data from your garden.</p> <p>Follow information from Best Practices HFSSGH poster.</p>		<p>CCSS: SL.1, SL.2, L.1, L.3, L.4, L.6</p> <p>CCSS: W.8, W.10</p>			