

**Cooking Maine Foods from the Ground Up**  
 Lesson Objectives Alignment to  
*Maine Learning Results: Parameters for Essential Instruction*

Lesson	Learning Objectives	Health Education Standards & Performance Indicators/Descriptors	Cross-Discipline Performance Indicators/Descriptors
Sanitation Activity 1	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain how germs are spread</li> <li>b. Explain how hand washing affects personal health</li> <li>c. Demonstrate good hand washing technique</li> </ul>	<p>A1. Students explain the relationship between healthy behaviors and personal health.</p> <p>A6. Students define basic health concepts related to family life; nutrition; <u>personal health</u>; safety and injury prevention; and tobacco, alcohol, and other drug use prevention.</p> <p>C1b. Demonstrate basic care of the human body.</p>	
Sanitation Activity 2	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Predict what will grow in the agar plates</li> <li>b. Observe bacterial growth over time</li> <li>c. Draw conclusions about the growth of germs and hand washing</li> </ul>		
Compost	<p>1. Identify basic composting concepts.</p> <p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Define composting</li> <li>b. Explain the two types of composting</li> <li>c. Explain the roll of worms in composting</li> <li>d. Give an example of a "brown" ingredient</li> <li>e. Give an example of a "green" ingredient</li> <li>f. Construct a worm composting bin</li> <li>g. Observe and record composting changes over time</li> </ul>		<p><b><u>ENGLISH LANGUAGE ARTS</u></b></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B4a. Establish a clear position on a topic and support the position with relevant evidence.</p> <p>B5a. Write a letter including a date, salutation, body, closing, signature and, when appropriate, an inside address.</p>

	<ul style="list-style-type: none"> <li>h. Demonstrate the importance of aeration</li> <li>i. Observe and record temperature and moisture of compost bin</li> <li>j. Construct a bar graph of temperature and moisture observations and explain the meaning of the graph</li> <li>k. Problem solve for compost bin problems</li> <li>l. Write to persuade parents to compost</li> <li>m. Write composting directions</li> </ul>		<p>B5b. Write multiple step directions for completing a task.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>SCIENCE</u></p> <p>D3c. Describe properties of original material(s), and the new material(s) formed, to demonstrate that a change has occurred.</p> <p><u>MATH</u></p> <p>*Third Grade</p> <p>B2. Students read, construct, and interpret bar graphs.</p> <p>*Fourth Grade</p> <p>B2. Students collect and represent data in tables, line plots, and bar graphs, and read and interpret these types of data.</p>
<p>Mini Lesson 1</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain the difference between organic and inorganic substances</li> <li>b. Predict what the worms will eat</li> <li>c. Observe decomposing items at established intervals</li> <li>d. Draw conclusions from the decomposing observations</li> </ul>		<p><u>SCIENCE</u></p> <p>D3c. Describe properties of original materials, and the new material(s) formed, to demonstrate that a change has occurred.</p> <p>A3b. Make tables or graphs to represent changes.</p>
<p>Mini Lesson 2</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Define <i>aeration</i></li> <li>b. Explain why aeration is important</li> <li>c. Define <i>micro-organism</i></li> <li>d. Explain the role of micro-organisms in producing compost</li> <li>e. Demonstrate how to turn the compost</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B2a. Provide enough details and</p>

	<ul style="list-style-type: none"> <li>f. Predict what will happen if compost is not aerated.</li> <li>g. Construct a table and record observations</li> <li>h. Write a paragraph based on the observations</li> </ul>		<p>description in an organized manner so the reader can imagine the event or experience.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>SCIENCE</u> A3b. Make tables or graphs to represent changes.</p>
<p>Mini Lesson 3</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain the role of carbon, nitrogen, and oxygen in composting</li> <li>b. Make a prediction as to which seeds will grow better</li> <li>c. Observe growth and record observation</li> <li>d. Draw conclusions based on experiment results and explain in a paragraph</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u> B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>SCIENCE</u> A3b. Make tables or graphs to represent changes</p>
<p>Mini Lesson 4</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain why compost bins need to be moist</li> <li>b. Test for correct moisture</li> </ul>		
<p>Mini Lesson 5</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain how worms can tell the difference between light and dark</li> <li>b. Predict worm behavior when placed in light</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u> B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p>

	<ul style="list-style-type: none"> <li>c. Record observations in a table</li> <li>d. Draw conclusions from the light experiment</li> <li>e. Explain the details of the experiment in a paragraph</li> </ul>		<p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>SCIENCE</u> A3b. Make tables or graphs to represent changes</p>
<p>Mini Lesson 6</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Label the worm diagram.</li> <li>b. Explain the role of worms in composting in a paragraph.</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u> B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p>
<p>Mini Lesson 7</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain what an invertebrate is</li> <li>b. Explain what a food web is</li> <li>c. Demonstrate an example of a food web</li> </ul>		
<p>Mini Lesson 8</p>	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain why pH is important for composting</li> <li>b. Determine pH of a variety of foods and record information in a table</li> <li>c. Draw conclusions about the materials that go into a compost bin</li> </ul>		<p><u>SCIENCE</u> A3b. Make tables or graphs to represent changes</p>

Mini Lesson 9	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Monitor temperature in a compost bin and record measurements in a table</li> <li>b. Use results to make adjustments to keep the bin within acceptable ranges</li> </ul>		<p><u>SCIENCE</u></p> <p>A3b. Make tables or graphs to represent changes</p>
Mini Lesson 10	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain the benefits to plants of using compost</li> <li>b. Make and use compost tea</li> </ul>		
Mini Lesson 11	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Observe bedding material changes in compost bin</li> <li>b. Harvest the finished vermicompost</li> <li>c. Give step-by-step directions for harvesting the vermicompost</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B5b. Write multiple-step directions for completing a task.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p>
Mini Lesson 12	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Trouble-shoot problems using an information chart.</li> </ul>		
Cranberry	<p>1. Identify concepts about variety, structure, and growth</p> <p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Explain how cranberries are grown from planting through harvesting</li> <li>b. Describe the environmental needs of cranberries (climate, soil, etc.)</li> <li>c. Describe how cranberries grow without human intervention</li> <li>d. Find the origin of cranberries on map</li> <li>e. Explain where cranberries are grown and harvested in Maine</li> <li>f. Write a letter using appropriate format or a paragraph with appropriate punctuation and capitalization</li> <li>g. Enter information into a table and construct a bar graph</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B5a. Write a letter including a date, salutation, body, closing, signature and, when appropriate, an inside address.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>MATH</u></p> <p>*Third Grade</p> <p>B2. Students read, construct, and</p>

			interpret bar graphs.  *Fourth Grade B2. Students collect and represent data in tables, line plots, and bar graphs, and read and interpret these types of data.
	2. Participate in composting activities		
Blueberry	1. Identify concepts about variety, structure, and growth <i>Students will be able to:</i> a. Describe the growth of blueberries from early spring through harvest b. Identify where blueberries are grown in Maine and find on map c. Explain what a nutrient is d. List the 6 nutrients e. Write a persuasive letter using the appropriate format and/or write a paragraph with appropriate punctuation and capitalization f. Enter information into a table g. Relate how eating a variety of foods affects a person's health	A1. Students explain the relationship between healthy behaviors and personal health.	<u>ENGLISH LANGUAGE ARTS</u> B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.  B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.  B5a. Write a letter including a date, salutation, body, closing, signature and, when appropriate, an inside address.  D2a. Use end marks correctly.  D2b. Capitalize correctly.
	2. Participate in composting activities		
Strawberry	1. Identify concepts about structure and growth <i>Students will be able to:</i> a. Explain how strawberries are grown b. Identify parts of the strawberry plant c. List the 3 nutrients found in strawberries d. Explain 2 health benefits of high fiber foods e. Design a healthy meal that includes strawberries	A1. Students explain the relationship between healthy behaviors and personal health.  C1a. Design healthy menus.	<u>ENGLISH LANGUAGE ARTS</u> B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.  B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.  D2a. Use end marks correctly.

	f. Write a paragraph describing how to grow strawberries		D2b. Capitalize correctly.
	2. Participate in composting activities		
Apple	<p>1. Identify concepts about variety, and growth</p> <p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Identify the number 1 apple producing state</li> <li>b. Explain the origin of apple growing in the U.S</li> <li>c. Locate orchards on a Maine map</li> <li>d. Write a public service announcement (PSA) for elementary students to eat apples for snacks instead of sugary foods</li> <li>e. Increase servings of a recipe using math strategies</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B3b. Write about a central question or idea by using relevant supporting facts and details.</p> <p>B4a. Establish a clear position on a topic and support the position with relevant evidence.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>MATH</u></p> <p>*Third Grade</p> <p>A3a. Use an operation appropriate to a given situation.</p> <p>*Fourth Grade</p> <p>A4a. Add and subtract fractions with like denominators and use repeated addition to multiply a unit fraction by a whole number.</p>
	2. Participate in composting activities		
Dairy	<p>1. Identify concepts about milk composition and production</p> <p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> <li>a. Locate the origin of dairy cows on a map</li> </ul>		<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p>

	<ul style="list-style-type: none"> <li>b. Identify the breed of cow that produces more milk</li> <li>c. Explain the difference between organic and traditional dairy farming</li> <li>d. Write Step by Step directions that Someone their age could follow for making a dairy fruit smoothie</li> <li>e. Students will write a paragraph with appropriate punctuation and capitalization</li> <li>f. Construct a bar graph for dairy nutrients</li> </ul>		<p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>B5b. Write multiple-step directions for completing a task.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>MATH</u>  *Third Grade  B2. Students read, construct, and interpret bar graphs.</p> <p>*Fourth Grade  B2. Students collect and represent data in tables, line plots, and bar graphs, and read and interpret these types of data</p>
	2. Participate in composting activities		
Spinach	1. Identify concepts about variety, structure, and growth <i>Students will be able to:</i> <ul style="list-style-type: none"> <li>a. Locate origin of spinach on a world map</li> <li>b. Identify the growing season of spinach in Maine</li> <li>c. Identify what part of the plant spinach is</li> <li>d. Write a persuasive letter using the appropriate format</li> <li>e. Explain how spinach nutrients help the body</li> <li>f. Plan a healthy lunch menu</li> </ul>	C1a. Design healthy menus.	<u>ENGLISH LANGUAGE ARTS</u> B4a. Establish a clear position on a topic and support the position with relevant evidence. B5a. Write a letter including a date, salutation, body, closing, signature and, when appropriate, an inside address. D2a. Use end marks correctly. D2b. Capitalize correctly.
	2. Participate in composting activities		

Oat	<p>1. Identify concepts about the structure and growth <i>Students will be able to:</i></p> <ol style="list-style-type: none"> <li>Explain what part of a plant an oat is</li> <li>Explain the origin of oats</li> <li>Explain the climate requirements for growing oats</li> <li>Identify where oats are grown in Maine</li> <li>Explain how diet affects health</li> <li>Write a paragraph about the importance of oats</li> </ol>	A1. Students explain the relationship between healthy behaviors and personal health.	<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>B3b. Write about a central question or idea by using relevant supporting facts and details.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p>
	3. Participate in composting activities		
Buckwheat	<p>1. Identify concepts about the structure and growth <i>Students will be able to:</i></p> <ol style="list-style-type: none"> <li>Explain what part of a plant buckwheat comes from</li> <li>Explain the origin of buckwheat and find it on a world map</li> <li>Explain the climate requirements for growing buckwheat</li> <li>Locate where buck wheat is grown in Maine</li> <li>Create meal plans for one day that include a variety of protein</li> <li>Write a paragraph with appropriate punctuation and capitalization</li> </ol>	C1a. Design healthy menus.	<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p>
	2. Participate in composting activities		

<p>Broccoli</p>	<p>1. Identify concepts about the structure and growth  <i>Students will be able to:</i>  a. Explain what part of a plant broccoli is  b. Explain the origin of broccoli and find it on a world map  c. Identify the season for optimal growth  d. Identify where broccoli is grown in Maine  e. Write a paragraph about the nutritional benefits of broccoli  g. Predict and observe changes due to Cooking  h. Record changes in table</p>		<p><u>ENGLISH LANGUAGE ARTS</u>  B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p> <p><u>SCIENCE</u>  A3b. Make tables or graphs to represent changes</p>
<p>Potato</p>	<p>2. Participate in composting activities</p> <p>1. Identify concepts about the variety, structure and growth  <i>Students will be able to:</i>  a. Explain what part of a plant potato is  b. Explain the origin of the potato and find it on a world map  c. Identify the season for optimal growth  d. Identify where potatoes are grown in Maine  e. Write directions for planting potatoes  f. Write story for the first grade about Mr. Potato. Include at least 3 potato facts.</p>		<p><u>ENGLISH LANGUAGE ARTS</u>  B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>B2b. Develop major events, settings, and characters and deal with problems and solutions in a story.</p> <p>B5b. Write multiple-step directions for completing a task.</p> <p>D1b. Use simple, compound, and complex sentences</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p>

	2. Participate in composting activities		
Squash	<p>1. Identify concepts about the variety, structure and growth</p> <p><i>Students will be able to:</i></p> <ol style="list-style-type: none"> <li>Explain what part of a plant squash is</li> <li>Explain the origin of the squash and find it on a world map</li> <li>Identify the growing season for squash</li> <li>Identify where squash is grown in Maine</li> <li>Identify the six important vitamins and minerals found in squash</li> <li>Write a persuasive letter using the appropriate format</li> <li>Explain how foods with vitamin A help to keep us health</li> </ol>	A1. Students explain the relationship between healthy behaviors and personal health.	<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B4a. Establish a clear position on a topic and support the position with relevant evidence.</p> <p>B5a. Write a persuasive letter including a date, salutation, body, closing, signature and, when appropriate, an inside address.</p> <p>D1b. Use simple, compound, and complex sentences</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly.</p>
	2. Participate in composting activities		
Mixed Vegetable	<p>1. Identify differences in growth and structure of selected vegetables</p> <p><i>Students will be able to:</i></p> <ol style="list-style-type: none"> <li>List at least 3 plant parts found in the vegetables on the pizza</li> <li>Explain the origins of the vegetables on the veggie pizza them on a world map</li> <li>Identify the growing seasons for the various vegetables</li> <li>Write directions for making a no-bake pizza</li> <li>Write a paragraph about pizza as a healthy food</li> <li>Create a lunch menu in which no-bake veggie pizza is one of the foods</li> </ol>	C1a. Design healthy menus	<p><u>ENGLISH LANGUAGE ARTS</u></p> <p>B1e. Write coherent paragraphs that have supporting sentences and a concluding sentence.</p> <p>B2a. Provide enough details and description in an organized manner so the reader can imagine the event or experience.</p> <p>B5b. Write multiple-step directions for completing a task.</p> <p>D1b. Use simple, compound, and complex sentences</p> <p>D2a. Use end marks correctly.</p> <p>D2b. Capitalize correctly</p>
	2. Participate in composting activities		

