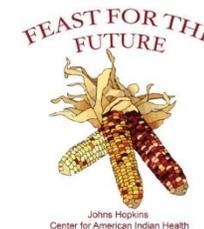


Edible School Garden Program: Curriculum Overview Chart

GRADE 5, Spring LESSONS



Updated 5/27/16

Lesson Number and Title	Learning Objectives	Lesson Activities	Workbook Pages	Teacher Resources	Materials and Preparation
<p>1 Eating a Rainbow</p>	<p>Explain the concept of a balanced diet.</p> <p>Define and discuss the benefits of “eating a rainbow” of colors from fruits and vegetables.</p> <p>Practice building balanced meals including fruits and vegetables of all different colors.</p> <p>Listen to an Elder describe how the traditional Native diet has changed over the years.</p>	<p>Warm-up Game</p> <p>Building a Balanced Meal</p> <p>Elder Discussion</p> <p>Taste the Rainbow-rainbow salad or six color salsa (optional)</p>	<p>Taste Test Observations</p> <p>Draw a Balanced Meal</p>	<p>None</p>	<ul style="list-style-type: none"> • 🗣️ Invite a Tribal Elder to discuss how the traditional Native diet has changed over the years with students. • Pens or pencils- 1 for each student • Crayons • Ingredients for optional recipes: 6-color salsa or rainbow salad. Ingredients and preparation listed in activity section of the lesson plan. • Optional warm-up game “Reviewing the 5 Food Groups” materials and preparation <ul style="list-style-type: none"> • 15 sheets of plain paper • Markers • Tape • Preparation: Write the name of each of the 5 food group on 5 separate sheets of paper (“Grains”, “Fruit”, “Vegetables”, “Protein”, “Dairy”). Write the names of these 5 nutrients on 5 separate sheets of paper (“Carbohydrates”, “Vitamin C”, “Vitamin A”, “Protein”, “Calcium”). Write the names or draw pictures of these 5 nutrient functions on 5 separate sheets of paper (“Energy”, “Immune system cuts burns scrapes”, “Eyes”, “Muscles” and “Bones”). • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student • *If you do not do the Taste the Rainbow activity, prepare vegetable snack of the week – 1 for each student

<p>2 Food Label Logic: Making Healthy Choices By Reading the Label</p>	<p>Identify key selected sections on the Nutrition Facts Food Label (calories, serving size, fat, sugar, vitamins and minerals).</p> <p>Interpret the information on the Nutrition Facts Food Label. Understand which nutrients should be high and which should be low on the food label of a healthy choice.</p> <p>Calculate grams to teaspoons for sugar in products.</p>	<p>High and Low on the Food Label</p> <p>Sugar on the Food Label</p> <p>Too much Sugar?</p> <p>Healthy Drinks</p>	<p>Taste Test Observations</p> <p>Drink Labels</p>	<p>Food Label Logic PowerPoint Presentation</p>	<ul style="list-style-type: none"> • Student water bottles- 1 per student. OR plastic disposable cups- 1 per student • Pieces of fruit washed and chopped (oranges, lemons, berries) for fruit infused water • Drinking water- about 1 cup or 8 oz per student • Spoons, plastic- 1 per student • Pens or pencils – 1 per student • Prepared vegetable snack of the week – 1 for each student • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student
<p>3 Food Pyramids and Pesticides</p>	<p>Describe the difference between organic and conventional farming methods.</p> <p>Explain how the interconnected nature of a food chain can be affected by pesticides.</p> <p>Describe a food pyramid.</p>	<p>The Hungry Eagle Food Pyramid</p> <p>Pesticides in the Food Pyramid</p> <p>Salty Celery (optional)</p> <p>Read Aloud <u>The Desert is Theirs</u> by Byrd Baylor (optional)</p>	<p>Taste Test Observations</p> <p>Pass it Up the Line</p>	<p>None</p>	<ul style="list-style-type: none"> • 8 plastic, beaded necklaces • Optional activity “Read aloud”: <u>The Desert is Theirs</u>, book by Byrd Baylor • Optional activity “Salty Celery”:4 celery sticks, 2 large cups or jars, Salt, Water <ul style="list-style-type: none"> • Preparation: Fill 1 jar with very salty water, fill the other jar with plain water. Soak 2 celery sticks in the salt water and 2 celery sticks in the plain water overnight. • Prepared vegetable snack of the week – 1 for each student • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student
<p>4 Conserving Water: A Renewable Resource</p>	<p>Observe and describe how the water cycle is a renewable resource.</p> <p>Define and describe the words “natural resource” and “renewable resource”.</p>	<p>Overview of Natural Resources</p> <p>Water Cycle Experiment</p> <p>Outside Saving Rainwater</p>	<p>Taste Test Observations</p> <p>Natural Resources</p> <p>The Water Cycle</p>	<p>None</p>	<ul style="list-style-type: none"> •  Invite a Tribal Elder to discuss traditional beliefs about water and rainfall • Tea kettle or saucepan to heat water • Electric Hot plate (electric outlet necessary) • Styrofoam cups- 1 per group of 5 students • Plastic cups- 1 per group of 5 students • Ice cubes- a handful per group of 5 students • Oven mitts • Colored pencils/crayons

	Describe ways to conserve water (specifically rainwater). Listen to a Tribal Elder discuss traditional beliefs about water and rain/water preservation.	Elder Discussion- Traditional beliefs about water and rain/preservation of water			<ul style="list-style-type: none"> • Prepared vegetable snack of the week – 1 for each student • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student
5 Soil and Erosion	Describe four kinds of erosion: wind, water, chemical, glacier. Understand how erosion relates to farming, gardening and land formation.	Erosion Experiments: - Wind Erosion - Water Erosion - Chemical Erosion - Glacier Erosion Sod vs. Soil	Taste Test Observations Erosion	Erosion Examples	<p><u>Wind erosion experiment:</u></p> <ul style="list-style-type: none"> • Shoebox or aluminum tin pan with hole-punches in the end • Sand and small rocks/pebbles to fill the shoebox/tin • Straws – 1 per student <p><u>Water erosion experiment:</u> Non-oily molding clay Pebbles, coins or plastic chips to put in the clay 1 aluminum tin pan to hold the clay Spray bottle filled with water</p> <p><u>Chemical erosion experiment:</u></p> <ul style="list-style-type: none"> • Glass jar filled with vinegar – 1 per experiment • Glass jar filled with water – 1 per experiment • Gobstopper candy (jawbreakers) – 2 per experiment <p><u>Alternate chemical erosion experiment:</u></p> <ul style="list-style-type: none"> • Chalk – 1 piece per experiment • Dropper filled with vinegar <p><u>Glacier erosion experiment:</u></p> <ul style="list-style-type: none"> • Ice cube – 1 per student • Modeling clay – 1 piece per student • Sand – 1 pinch per student <p><u>Sod vs. soil experiment</u></p> <ul style="list-style-type: none"> • Small piece of sod • Soil to put in tin pan • 2 aluminum tin pans • Cup of water • Practice each activity prior to teaching this lesson to be sure it works for you. Prior to class, prepare each experiment station as instructed. • Prepared vegetable snack of the week – 1 for each student

					<ul style="list-style-type: none"> Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student 										
6 Whole Grains Taste Great!	<p>Describe the structural and nutritional differences between whole grains and refined grains.</p> <p>Explain why whole grains are more healthful than refined grains.</p>	<p>Experimenting with Whole Grains</p> <p>Tasting Whole Grains</p>	<p>Taste Test Observations</p> <p>Taste Testing Whole Grains</p> <p>Experimenting With Whole Grains</p>	None	<ul style="list-style-type: none"> Sand paper, 2 small squares per student or group of students Brown rice or black wild rice (black wild rice works better), 2 grains per student or group of students Whole grain and refined grain food samples for comparison (see chart for ideas) Food containers or paper plates labeled A and B, 1 labeled A and 1 labeled B per each food sample Preparation for “Taste Testing Whole Grains” activity Choose several different grain products samples (see chart below for ideas). Label 1 container or paper plate with an A and one with a B. Place the whole grain sample on one plate and the refined grain sample on the other. Make an answer key chart for yourself. Repeat for all grain sample foods. <table border="1"> <thead> <tr> <th>Whole Grain (Sample A or B)</th> <th>Refined Grain (Sample A or B)</th> </tr> </thead> <tbody> <tr> <td>Brown Rice</td> <td>White Rice</td> </tr> <tr> <td>Whole wheat bread</td> <td>White bread</td> </tr> <tr> <td>Popcorn</td> <td>Cracker made with refined flour</td> </tr> <tr> <td>Corn tortilla</td> <td>White flour tortilla</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student *If you do not do the Taste Testing Whole Grains activity, prepare vegetable snack of the week – 1 for each student 	Whole Grain (Sample A or B)	Refined Grain (Sample A or B)	Brown Rice	White Rice	Whole wheat bread	White bread	Popcorn	Cracker made with refined flour	Corn tortilla	White flour tortilla
Whole Grain (Sample A or B)	Refined Grain (Sample A or B)														
Brown Rice	White Rice														
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7 Digestion	<p>Measure the water composition of fruit.</p> <p>Learn the importance of drinking 6-8 cups of water each day.</p> <p>Discuss ways to drink more water during the day.</p>	<p>Water in our Food</p> <p>Digestion: Food’s Journey Through Our Bodies</p> <p>Digestion Demonstration</p>	<p>Taste Test Observations</p> <p>My Water Goal</p> <p>Your Food’s Journey Through Your Body</p> <p>Water Weights</p>	None	<ul style="list-style-type: none"> Fresh and dried fruits for weighing (examples: grapes/raisins, fresh apricots/dried apricots) Balance scale Ziplock bags, 2 Crackers, 2-3 (Saltine type) Water, about 1 Tablespoon Orange juice, about 1 Tablespoon 1 long strip of construction paper or other type of paper Pantyhose, 1 										

	Explore the digestive system and describe what happens in each major organ during the digestive process (mouth, stomach, small intestine, large intestine).				<ul style="list-style-type: none"> • Cooked instant oatmeal, 1 packet or about 1 cup • Small plastic container or bucket • Prepared vegetable snack of the week – 1 for each student • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student
8 Reduce, Reuse, Recycle	<p>Learn the 3 “R’s” of conservation: reduce, reuse, recycle.</p> <p>Appreciate the importance of reducing, reusing and recycling for our garden and our earth.</p> <p>Identify ways to reduce, reuse and recycle at home and at school.</p>	<p>Literature Corner</p> <p>Taking Action</p>	<p>Taste Test Observations</p> <p>Recycling Symbols</p> <p>Sarah Cynthia Sylvia Stout Would Not Take the Garbage Out</p>	Trash Pictures	<ul style="list-style-type: none"> • Poster boards or poster paper – 6 • Markers – 6 sets • 5-7 examples of items that can be recycled (e.g. glass bottles, plastic water bottles, laundry or dish detergent bottles, cereal boxes, aluminum cans, newspapers, magazines, plastic yogurt cups) • 2 examples of individually wrapped food items and the same food item in a larger container (e.g. mini bags of popcorn and a large bag of popcorn; juice boxes and a gallon of the same juice) • Projector, speakers and internet connection to play this video: http://www.youtube.com/watch?v=loeHhmUh-nE • Prior to the class, find out where there are recycling centers in the community and find out what types of materials they accept; also find out about any recycling processes at the school • Prepared vegetable snack of the week – 1 for each student • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student
9 Plant Parts: Flowers and Pollination	<p>Learn the structure and function of flower parts: petals, pollen, pistil and stamen.</p> <p>Understand the purpose and process of pollination.</p> <p>Identify traditional uses of flowers and/or pollen.</p>	<p>Flower Dissection</p> <p>Pollination Demonstration</p> <p>Elder Discussion</p>	<p>Taste Test Observations</p> <p>Flowers in Bloom</p>	None	<ul style="list-style-type: none"> •  Invite a Tribal Elder to discuss traditional uses of flowers and/or pollen • Materials for Flower Dissection Activity: <ul style="list-style-type: none"> • Tulips, lilies or geraniums for dissection, 1 per pair of students • Toothpicks, 1 per each pair of students • Q-tips, 1 per each pair of students • Magnifying glasses, several • Materials for Pollination Demonstration: <ul style="list-style-type: none"> • Glitter, flour or cornmeal, about ½ cup

					<ul style="list-style-type: none"> • Paper plates, 1 or 2 • Prepared vegetable snack of the week – 1 for each student • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student
10 Our Favorite Fruits and Vegetables	<p>Repeat the food preference study from the beginning of the year (Fall Lesson 1) to understand how the class’ preferences for fruits and vegetables may have changed.</p> <p>Review how fruits and vegetables support health.</p> <p>Know how many servings of fruits and vegetables they should eat every day (5) using their fingers.</p>	<p>Food Preference Study</p> <p>Eating Plant Parts</p> <p>Fruits and Veggies Make Super Snacks</p>	<p>Food Preference Study</p> <p>Eating Plant Parts</p>	None	<ul style="list-style-type: none"> • Food Preference Study poster board from Fall lesson 1 • 1 blank sheet of 22” x 28” white poster board <ul style="list-style-type: none"> • Title the board, “Food Preference Study” • Hang poster boards in a visible space in the classroom • Markers for writing the poster boards • Pins or tape for hanging up the poster boards • Fruits and vegetables for the plant snack food preference study; washed and chopped into snack sized pieces <ul style="list-style-type: none"> • Use the same 4 varieties of fruits and vegetables that were used for the first food preference study in the Fall (i.e. carrots, broccoli, radishes, apples, tomatoes, celery) • Each student receives a total of 4 pieces; 1 piece of each variety • Napkins; at least 1 per student • Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student
FLOATER LESSON: Starter Plants	<p>Learn how to plant seeds using seed packet information.</p> <p>Learn why it is important to plant starter plants.</p> <p>Prepare starter plants in trays.</p>	<p>Reading Seed Packets</p> <p>Starter Plant Trays</p>	None	None	<ul style="list-style-type: none"> • Seed packets (1 per student or pair) • Popsicle sticks • Markers • Shovels • Watering cans • Starter trays (find these at any greenhouse store, or online) • Composted soil
FLOATER LESSON: Garden-to-Market Sales Activity	<p>Learn how to calculate which garden-related items can be purchased using the proceeds that were made</p>	<p>Garden-to-Market Sales Activity</p>	None	<p>Garden-to-Market Sales Teacher Handout</p> <p>*Revise items if they are not available to you</p>	<ul style="list-style-type: none"> • Pictures of harvested vegetables/fruit • Pictures of the market where the harvest was sold • Computer • Projector

	from the garden-to-market sales.			and/or item cost if the cost is different in your area.	
FLOATER LESSON: Lasagna Beds	Learn what lasagna beds are and why they are used. Learn how to prepare a lasagna bed.	Building Lasagna Beds	None	None	Please note: quantity of lasagna bed materials will depend on how large the bed is <ul style="list-style-type: none"> • Cardboard • Shredded paper • Saw dust (go to your local wood shop and they can fill bags) • Coffee or espresso grounds (go to your local coffee shop and ask for old grounds) • Scraps of vegetable and fruit trimmings • Fish meal/emulsion • Grass trimmings • Wood chips • Peat moss • Manure • Leaves • Straw • Composted soil • Watering cans • Shovels <ul style="list-style-type: none"> ○ Prior to class, review Building Lasagna Beds in the Reference Manual
FLOATER LESSON: What is a Weed	Explore where and why weeds grow. Learn how to identify weeds.	Weed Quiz Identifying Weeds Optional Activity: Weeding in the garden	None	None	<ul style="list-style-type: none"> • Ziploc bags (1 per student) • Blank paper (1 per student) • Markers • Optional Activity: Weeding materials (shovels, gloves, etc.)
FLOATER LESSON: Terrible Weeds	Learn how weeds affect the school garden and the environment. Create wanted posters for their weeds.	Weed Collection Wanted: Weeds	None	Wanted Weeds Handout	<ul style="list-style-type: none"> • Weeding materials (shovels, gloves, etc.) • Markers and/or crayons • Tape

FLOATER LESSON: Jeopardy Review Game	Review knowledge gained during the Edible School Garden Program.	Jeopardy!	None	Jeopardy Game PowerPoint Presentation	<ul style="list-style-type: none"> • Computer • Projector • Prior to class, review Jeopardy Game PowerPoint Presentation and familiarize yourself with the answers.
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