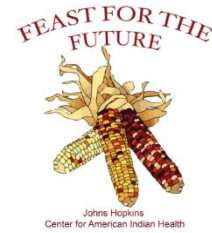


Edible School Garden Program: Curriculum Overview Chart

GRADE 5, FALL LESSONS



Updated 5/27/16

Lesson Number and Title	Learning Objectives	Lesson Activities	Workbook Pages	Teacher Resources	Materials and Preparation
1 Introduction to the Edible School Garden Program	<p>Clearly explain the rules of the garden classroom.</p> <p>Sample plant food snacks and describe the plant food preferences of the class.</p> <p>Describe some ways in which people use plants.</p>	<p>Food Preference Study</p> <p>Garden Tour and Rules</p> <p>Edible School Garden Scavenger Hunt (optional)</p>	<p>Food Preference Study</p>	<p>Full Value Commitment</p> <p>Safety Briefing</p> <p>Edible School Garden Scavenger Hunt Item List (optional)</p>	<ul style="list-style-type: none"> • 2 sheets of 22" x 28" white poster boards <ul style="list-style-type: none"> ○ Title one board "Garden Rules" and title the other "Food Preference Study" ○ Hang poster boards in a visible space in the classroom • Markers for writing garden rules on 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"> ○ You will need at least 4 different varieties of fruits and vegetables (i.e. carrots, broccoli, radishes, apples, tomatoes, celery) ○ Each student receives a total of 4 pieces; 1 piece of each variety • Napkins, at least one 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
2 The Plant Life Cycle	<p>Recall the 6 plant parts and their functions.</p> <p>Describe the process of plant growth and the plant's life cycle.</p> <p>Identify traditional names for plant parts.</p>	<p>Plant Part Song</p> <p>Elder Discussion</p> <p>Flower Fantasy Story</p> <p>Scavenger Hunt</p>	<p>Taste Test Observations</p> <p>Flower Fantasy</p>	<p>Plant Part Song Lyrics</p> <p>Plant Part Song MP3</p>	<ul style="list-style-type: none"> • Crayons; at least 2-3 per student • Computer with speakers or other device to play the MP3 file • 🗣️ Invite an Elder to join the class and introduce the traditional names of plant parts and some traditional uses of plant parts • Prepared vegetable snack of the week – 1 for each student

	Describe traditional uses for plant parts.				<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
3 Worm Investigations	<p>Describe how earthworms help the soil in the garden.</p> <p>Describe which environments worms prefer; light or dark, damp or dry.</p> <p>Gain an appreciation for earthworms and learn to treat them gently and respectfully.</p>	<p>What is a Worm?</p> <p>Worm Investigations</p> <p>Worm Races (optional)</p>	<p>Taste Test Observations</p> <p>Worm Investigations</p>	Worm Station Cards	<ul style="list-style-type: none"> Earthworms; 1 worm for each group of 2 students (from a bait shop or dug up from the soil) Small (Dixie) cups of soil; 1 for each group of 2 students Moist soil; enough to fill all small Dixie cups and 2 flat pans or boxes used in the investigation activity Magnifying glasses or microscopes if available 1 roll of paper towels 6 flat pans or boxes for worm stations Water in a medium container (for wetting paper towels in station #2) Two pieces of 8x10" cardboard or dark colored paper Tape Rulers; 1 for each group of 2 students or 4-5 rulers to pass around between groups. Pens or pencils; 1 for each student Stopwatch, clock, or other device for timing 3 shoeboxes 3 sheets of paper and markers for making station labels 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
4 Seed Saving	<p>Describe the purpose of seed saving.</p> <p>Identify the steps involved in seed saving.</p> <p>Describe local practices for seed saving.</p> <p>Recognize the difference between self-pollinating and cross-pollinating.</p>	<p>Seed Saving</p> <p>Elder Discussion</p>	Taste Test Observations	<p>Cross-Pollination Lesson</p> <p>Preparation: Seed Saving Instructions</p>	<ul style="list-style-type: none"> 5-8 large tomatoes for preparation prior to the class Seeds prepared 5-6 days before the class (see Lesson Preparation: Seed Saving Instructions) Seeds prepared 2-3 days before the class (see Lesson Preparation: Seed Saving Instructions) Large tomatoes for in-class use; 1 per group of 2-3 students Plastic knives; 1 per group of 2-3 students Plastic spoons; 1 per group of 2-3 students Small plastic cups; 1 per group of 2-3 students Paper towels

					<ul style="list-style-type: none"> • Access to water (a sink or a jug of water) • Plastic-wrap • Strainer • Paper plates; 1 per group of 2-3 students • Wax paper • Envelopes for seed saving; 1 per student • Crayons • 🗣️ Invite an Elder to join the class and discuss the importance of seed saving and local practices for seed saving • 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 Plant Parts – Leaves and Photosynthesis	<p>Describe the process of photosynthesis.</p> <p>Understand the function of leaves in the process of photosynthesis.</p> <p>Identify pigments in the leaves of plants.</p> <p>Recall the three things that plants need to survive.</p>	Chlorophyll Experiment	Taste Test Observations The Life Cycle of a Plant Chlorophyll Experiment Photosynthesis	Photosynthesis PowerPoint	<ul style="list-style-type: none"> • Leaves in at least 3 colors (such as purple cabbage, red leaf lettuce, spinach, green leaf lettuce, or Maple leaves or other leaves that change color in the fall), prepared so there are 2 individual leaves per student • White coffee filters cut into strips 1 inch wide; 1 per group of 2-3 students • Coins; 1 per group of 2-3 students • Rubbing alcohol • Mason jars; 1 per group of 2-3 students • Pencil or pen; 1 per group of 2-3 students • Tape; 1 per group of 2-3 students • Foil pieces to cover jar; 1 per group of 2-3 students • Projector to show the slides • Try the chlorophyll experiment before the class so you know how to demonstrate the activity • 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
6 Drying Foods the Traditional Way	<p>Be able to list common methods for drying foods.</p> <p>Have a basic understanding of what happens chemically</p>	Making Chile Ristras Elder Discussion	Taste Test Observations	None	<ul style="list-style-type: none"> • Consider making an example ristra before leading this class. • Red chile peppers, freshly picked • String, lightweight cotton

	<p>during the process of drying foods.</p> <p>Gain an appreciation for drying foods the traditional way and the importance of dried foods in traditional Native life.</p>				<ul style="list-style-type: none"> • Wire • Scissors • Raffia ribbon • 🗣️ Invite an Elder to lead the class activities on “making chile ristras” or to speak at the end of the lesson on the traditional importance of preserving food • 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
7 The Super 6 Nutrients	<p>Identify and describe the key 6 nutrients (protein, vitamins, minerals, carbohydrates, fat and water) found in each food group in MyPlate.</p>	Hunt for the Good Stuff	Taste Test Observations Nutrient Chart	Nutrient Cards Pictures of Native Foods	<ul style="list-style-type: none"> • Small brown paper bags; at least 1 for every group of 3 students • 1 pair of scissors for cutting nutrient cards • 1 marker for writing on bags • Prepare for the activity “Hunt for the Good Stuff” by making Native food bags – see lesson for instructions • 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 Comparing Food Labels: Battle of the Labels	<p>Learn to read and accurately interpret a Nutrition Facts food label on food packages.</p> <p>Describe which nutrients should be high and which should be low on a healthy Nutrition Facts food label using the 5-10-20 % rule.</p> <p>Compare various nutrients on Nutrition Facts food labels of 2 different foods.</p>	Milk Label Challenge High and Low Battle of the Labels	Taste Test Observations Reading Nutrition Labels – 100% Whole Wheat Bread Milk Label Challenge Facts Up Front Battle of the Labels	Food Labels for “Battle of the Labels”	<ul style="list-style-type: none"> • Pens • Paper • Optional, one loaf of 100% whole wheat bread in original store package • Print and prepare food labels – see lesson for instructions • 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>9 What?! That's a Serving!?</p>	<p>Learn ways to measure serving sizes using hands.</p> <p>Identify and measure appropriate serving sizes of various foods.</p> <p>Plan a meal with portion control.</p>	<p>Portion vs. Serving Size</p> <p>There are How Many Servings in My Portion?</p> <p>How to Measure Your Portions – Make a Plate</p>	<p>Taste Test Observations</p> <p>There are <i>How</i> Many Servings in My Portion?</p> <p>Using Your Hands to Measure Serving Sizes</p>	<p>None</p>	<ul style="list-style-type: none"> • 1 large bag of chips, at least half full of chips • 20 oz bottle of soda, empty • Whiteboard or Blackboard with dry erase markers or chalk • 4 or 5 different foods for the guessing servings game – see instructions in lesson • 12-15 bowls, plates and/or cups for the guessing servings game – see instructions in lesson • Plastic wrap (such as saran wrap) • Tablespoon measure, 1 cup measuring cup, ½ cup measuring cup • Approximately 30 paper plates, or 1 for each 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>10 Companion Planting and Traditional Cooking</p>	<p>Define the concept of companion planting.</p> <p>Become familiar with the Three Sisters traditional story.</p> <p>Understand the importance of cooking traditional foods from the garden and connect with a Tribal Elder.</p>	<p>The Three Sisters</p> <p>Cooking Traditional Foods</p>	<p>Taste Test Observations</p> <p>Who are the Three Sisters?</p>	<p>None</p>	<ul style="list-style-type: none"> • Spoons (disposable); at least 1 per student • Bowls (disposable); at least 1 per student • Paper towels or napkins; at least one per student • Equipment and ingredients as per the recipe that will be used for the cooking demonstration – see recipes in the lesson plan • 🗣️ Invite a Tribal Elder to lead the cooking demonstration • 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 Cooking Traditional Foods activity, prepare vegetable snack of the week – 1 for each student
<p>FLOATER LESSON: Starter Plants</p>	<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>	<p>None</p>	<p>None</p>	<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	Learn how to calculate which garden-related items can be purchased using the proceeds that were made from the garden-to-market sales.	Garden-to-Market Sales Activity	None	Garden-to-Market Sales Teacher Handout *Revise items if they are not available to you and/or item cost if the cost is different in your area.	<ul style="list-style-type: none"> • Pictures of harvested vegetables/fruit • Pictures of the market where the harvest was sold • Computer • Projector
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.