

Kitchen Lesson K8-9

Pizza Celebration!

Communication

Students collaborate in teams to grind grain, make pizza dough, harvest and prep toppings and prepare lemonade for a garden celebration.

Sustainability

Edible Schoolyard students prove that it is possible to throw a party without purchasing pre-made food, disposable tableware or canned beverages.

Nourishment

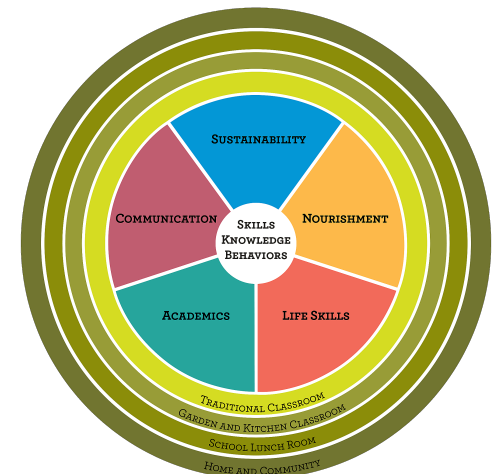
Students learn to prepare pizza dough, pizza sauce and lemonade and eating them together in the garden.

Academics

This lesson fulfills Common Core State Standards for collaborative discussion; speaking and listening; language; following multistep procedures; integrating quantitative or technical information; Health Standards for making healthy food choices; safe food handling and preparing nutritious food.

Life Skills

Students learn how to make vegetarian chili and cornbread, two economical, quick and nutritious recipes and reflect on the wide variety of factors they have to take into consideration when deciding what to eat.



Pizza Celebration Abstract

In this final Edible Schoolyard lesson for 8th graders, students celebrate their completion of the program by making wood fired pizza and lemonade in the ESY garden.

Objectives

After this lesson, students will be able to:

- Make lemonade, pizza sauce and pizza dough from scratch
- Form dough and build a pizza with sauce, cheese and toppings
- Discuss their experiences of baking pizza in a wood fired oven and eating it in the ESY garden with their teachers and classmates

Assessments

During this lesson, students will:

- Make pizza sauce, pizza dough, lemonade and prep pizza toppings
- Form their dough and build a pizza with sauce, cheese and toppings
- Watch their pizza bake in the wood fired oven and eat it in the ESY garden with their teachers and classmates

Communication is strengthened by collaborating in teams to prepare pizza and lemonade. **Sustainability** is highlighted by throwing a party without purchasing pre-made food, disposable tableware or canned beverages. **Nourishment** is explored by preparing party food and sharing it in the garden. **Life Skills** are sharpened by learning to make pizza dough, pizza sauce and lemonade from scratch.

Academics fulfill Common Core State Standards in ELA for collaborative discussion; speaking and listening, language; following multistep procedures; integrating quantitative or technical information; Health Standards for making healthy food choices; safe food handling and preparing nutritious food. See **Connections to Academic Standards** below for details.

Edible Schoolyard curriculum emphasizes developing community and personal stewardship, along with skills that will help students navigate different situations throughout their lives; choosing the **right tool** for each job; **measuring** precisely;

mastering knife skills; and **collaborating** to identify, choose, and complete jobs to execute recipes. See **Connections to *Edible Schoolyard* Standards** below for details.

This lesson follows the BEETLES Project's ***Learning Cycle*** (Invitation-> Exploration -> Concept Invention -> Application -> Reflection) and uses their ***Discussion Routines*** (Think-Pair-Share, Whip-Around). All are highlighted in **Green*** with an asterisk for easy identification. See the documents BEETLES_Discussion_Routines.pdf and BEETLES_Learning_Cycle.pdf included in **Resources** below for more information. Games and activities from other sources are also identified in **Green**, without an asterisk.

Connections to *Academic Standards*

Common Core State Standards, English Language Arts and Literacy, Grade 8

- SL.8.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher- led) with diverse partners on *grade 8 topics, texts, and issues*, building on others' ideas and expressing their own clearly.
 - SL.8.1.b Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
 - SL.8.1.b Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
 - SL.8.1.c Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.
- SL.8.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
- SL.8.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 8 Language standards 1 and 3 on page 53 for specific expectations.)
- L.8.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - L.8.1.d Recognize and correct inappropriate shifts in verb voice and mood.
- L.8.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- L.8.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.
- RH.6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies. RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

- RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
- RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

Health Education Content Standards for California Public Schools, Grades 7&8,

- 1.4.N Describe how to keep food safe through proper food purchasing, preparation, and storage practices.
- 1.8.N Identify ways to prepare food that are consistent with current research-based guidelines for a nutritionally balanced diet.
- 4.1.N Demonstrate the ability to use effective skills to model healthy decision making and prevent overconsumption of foods and beverages.
- 7.1.N Make healthy food choices in a variety of settings.
- 7.2.N Explain proper food handling safety when preparing meals and snacks.

Connections to *Edible Schoolyard* Standards

Edible Schoolyard 3.0

In the Edible Schoolyard Program

- 1.0 Students work with each other and teachers to develop community and personal stewardship, along with skills that will help them navigate different situations throughout their lives.
- 1.1.1 – 1.3.12 This lesson fulfills all Edible Schoolyard Program standards, numbers 1.1.1 through 1.3.12. See *The Edible Schoolyard Berkeley Standards* for details.

In the Kitchen Classroom, 8th grade

- Tools 2.1.1 Choose the **right tool** for each job at the ESY Cooking Station, anticipate steps of the recipe, and take initiative to cook independently.
- Tools 2.1.2 Select measuring **tools** from the ESY Toolbox to measure precisely and convert measurements.
- Tools 2.1.3 Demonstrate mastery of **knife** skills, safety and care using knives from the ESY Toolbox.
- Concepts 2.3.8 Approach lessons with **intention** by thinking through how the recipe relates to the kitchen, garden, and wider environment as a whole.
- Concepts 2.3.9 **Collaborate** to identify, choose, and complete jobs to execute recipes, and explain each individual contribution to the end result.

Pizza Celebration Lesson

Materials

- Pizza Sauce recipe
- Pizza Dough recipe
- Lemonade recipe

For the Wood Fired Oven

- Oven peels
- Wire brush
- 2 Damp towels

For the Handwashing Station

- Bucket of warm soapy water
- Bucket of warm rinsing water
- 2 Towels

For the Pizza Building Station

- 2 Tables
- 2 Rags
- 2 Table cloths
- 6 Wooden pizza peels
- 2 Flour bowls
- Toppings

For the Pizza Building Station Side Table

- Table cloth
- Cleaning Rag
- Really big butcher block
- Pizza cutter

- Trays

For the Eating Station

- Cups
- Napkins
- Dirty dishes basin
- Compost basin

For the Grain Grinding Station

- Grain grinding bike
- 3 Mortar and pestle
- 3 Mixing bowls
- Wheat berries
- Canvas bags for threshing
- Whole, dried wheat bushels for threshing
- Wooden winnowing bowls

Ingredients for the Pizza Dough

- Pizza flour
- Wheat flour
- Yeast
- Salt
- Sugar
- Olive oil

Ingredients for the Toppings

- An assortment of herbs, green garlic and spring onions
- Chard, kale, spinach
- Olives
- Olive Oil
- Fresh garden ingredients

Ingredients for the Pizza Building Station

- Pizza sauce
- Grated cheese
- Toppings

Ingredients for the Lemonade

- Lemons
- Sugar or honey
- Water

Tools for the Dough Station

- 1 Large metal mixing bowl
- 1 Plastic 4 cup measuring cup
- 2 Sets measuring spoons
- 1 Plastic measuring beaker
- 3 Bench scrapers
- 1 Metal one cup measure
- 1 Small metal whisk
- 2-3 Half sheet pans
- Plastic wrap
- 1 Plastic dough scraper
- 1 Wooden spoon

Tools for the Toppings Station

- Chef Knives
- Cast Iron Skillet
- Cutting Boards
- Strainers

Equipment

- Wood Fired Oven or Oven

Timeline Overview

Total Duration: 90 minutes

1. *Invitation** (5 minutes)
2. **Pizza Work Rotation** (60 minutes)
3. **Make and Eat Pizza** (20 minutes)
4. *Reflection** (5 minutes)

Before you Begin

- Collect all materials and build a fire in the Wood Fired Oven (it takes about 90 minutes to fully warm the ESY oven)
- Make the Pizza Sauce
- Make Pizza Dough for the first class
- Collect all materials and setup the **Pizza Building Station** and **Pizza Building Station Side Table**
- Collect all materials and setup the **Eating Station**
- Collect all materials and setup the **Dough Station**
- Collect all materials and setup the **Grain Grinding Station**
- Collect all materials and setup the **Lemonade Station**
- Collect all materials and setup the **Toppings Station**

Procedures

At the Opening Circle

(Use the word celebrate in a sentence: “We are excited to celebrate the culmination of your three years in the Edible Schoolyard Program today!”)

1. *Invitation**: (5 minutes)

Welcome students and explain that today they will work together to celebrate their last day in the Edible Schoolyard with pizza and lemonade.

- a. Explain that today’s four working groups are all devoted to tasks to prepare for eating pizza, and that working groups will rotate through the Pizza Building Station where, in teams of two, students will have the opportunity to form their pizza dough and build it with sauce, cheese and toppings.
- b. Go over today’s garden jobs and divide students into 4 working groups, one group for each job. Today’s jobs are:
 - c. **Dough** – Students “pay it forward” by making dough in the kitchen classroom for later classes.
 - d. **Grain Griding** – Students use a variety of methods to grind wheat to use in the pizza dough.

- e. **Lemonade** – Students make lemonade at the outdoor kitchen and keep the Eating Station supplied with it.
- f. **Toppings** – Students harvest crops from the garden, wash and prep them for use at the Pizza Building Station.

In the Field

2. Pizza Work Rotation: (40 minutes)

Each group rotates through the Pizza Building Station as the other groups work in the kitchen classroom, outdoor kitchen and garden.

- a. The Dough group starts at the Pizza Building Station, where in groups of two they will assemble a pizza.
- b. When the first group finishes baking their pizzas, they may sit down at the Eating Station to eat.
- c. When the bell rings, the next group proceeds to the Hand Washing Station and then to the Pizza Building Station.
- d. It will take a total of 80 minutes to rotate all groups through the Pizza Building Station and Pizza Eating Station.
- e. After each group's Pizza Work Rotation is complete, students may relax in the garden or visit the chickens.

At the Pizza Building Station

3. Make and Eat Pizza (20 minutes)

- a. Demonstrate how to pull the dough on a pizza peel and add toppings, making sure to emphasize using enough flour to ensure adequate “scotch” (the dough’s ability to move independent of the peel, so that it will slide off into the oven).
- b. Give a ball of dough to each team of two students and have them assemble their pizza.
- c. Bake each pizza in the wood fired oven.
- d. When pizzas are done, students proceed to the Eating Station, eat their pizza and drink lemonade.

At the Closing Circle

4. Reflection*: (10 minutes)

- a. Thank students for helping make the pizza celebration a success.
- b. Ask students to participate in one final **Whip Around** and share their favorite experience in the garden over their three years at King Middle School.

Contributors

All lessons at the Edible Schoolyard Berkeley are developed in collaboration with the teachers and staff of the Edible Schoolyard and Martin Luther King Jr. Middle School.

Learning Cycle and Think-Pair-Share discussion routine © The Regents of the University of California. All materials created by BEETLESTM at The Lawrence Hall of Science.

Resources

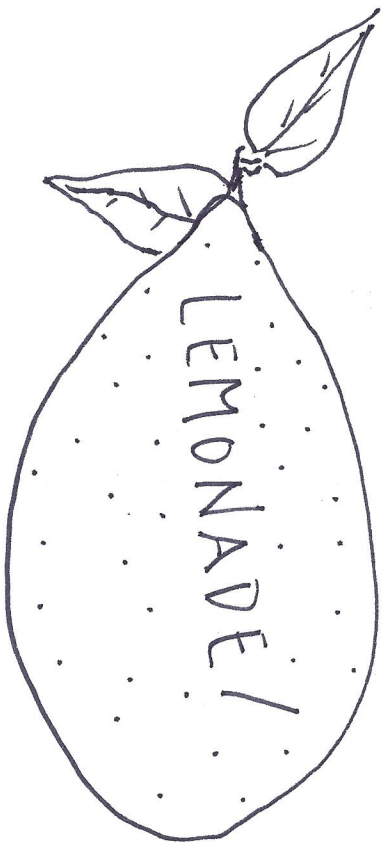
Pizza_Sauce_Recipe.pdf

Pizza_Dough_Recipe.pdf

Lemonade_Recipe.pdf

BEETLES_Learning_Cycle.pdf (See lesson G6-0)

BEETLES_Discussion_Routines.pdf (See lesson G6-1)



6 CUPS WATER

1/2 CUP SUGAR OR HONEY

ZEST OF 2 LEMONS

JUICE OF 6 LEMONS

2 CUPS ICE CUBES

FRESH MINT FOR GARNISH

POUR WATER INTO A LARGE PITCHER, ADD THE SUGAR OR HONEY AND STIR TILL IT DISSOLVES. ADD LEMON ZEST, LEMON JUICE AND THE ICE CUBES AND MIX WELL. GARNISH WITH FRESH MINT.

OPTION: ADD A DROP OF VANILLA EXTRACT FOR A DEEPER FLAVOR.

PIZZA DOUGH

1 1/2 CUPS WARM WATER

2 PACKETS YEAST (2 TABLESPOONS)

1/4 CUP OLIVE OIL

2 TABLESPOONS SUGAR

2 TEASPOONS SALT

4 CUPS FLOUR

1) POUR 1 1/2 CUPS WARM WATER INTO A LARGE BOWL,
SPRINKLE WITH THE YEAST AND LET STAND TILL
FOAMY, ABOUT 5 MINUTES.

2) WHISK OIL, SUGAR AND SALT INTO THE YEAST MIXTURE.
ADD THE FLOUR AND STIR UNTIL A STICKY DOUGH
FORMS. TRANSFER DOUGH TO AN OILED BOWL AND BRUSH
THE TOP WITH OIL. COVER BOWL WITH PLASTIC WRAP
AND SET ASIDE IN A WARM PLACE TILL DOUGH DOUBLES
IN SIZE - ABOUT 1/2 HOUR. TURN DOUGH OUT ON A
LIGHTLY FLOURED SURFACE AND GENTLY KNEAD
1 OR 2 TIMES BEFORE USING. MAKES 2 & DOUBLE
PORTIONS.

TOMATO SAUCE FOR 8TH GRADE PIZZA EXTRAVAGANZA /

- 6 ONIONS - PEEL + DICED
- 6 CARROTS - PEEL + DICED OR SHREDDED
- 6 CELERY RIBS - DICED
- 2 CUPS OLIVE OIL
- 8 BAY LEAVES
- 2 + TEASPOONS RED PEPPER FLAKES
- 6 CANS TOMATO PASTE
- 24 LARGE (28 OZ.) CANS TOMATO PUREE
(SAN MARZANO TOMATOES ARE BEST)

THIS WORKS BEST DIVIDED IN TWO LARGE STOCK POTS.

SAUTE THE ONIONS, CARROTS, CELERY, BAY LEAVES
AND RED PEPPER FLAKES IN HEATED OLIVE OIL.

WHEN SOFT ADD THE TOMATO PASTE AND COOK TILL
IT JUST BEGINS TO BROWN. ADD THE TOMATO
PUREE AND SIMMER OVER LOW HEAT FOR 1-2
HOURS.