

# Mozzarella Mash

## Bake Pizza for Personal, Family & Community Benefits



Provided by HBA Educator Award Winner *Carla Schaer, Family & Consumer Sciences Teacher, Midland High School, IL* with *Sharon Davis, FCS Education, [HomeBaking.org](http://HomeBaking.org)*

*In Carla Schaer's Illinois FCS class, students learn pizza production hands-on.* Says Carla: "The pizza unit is a favorite of Midland H.S. FCS students. It provides experience baking with yeast, flour and dough safe food handler skills that apply at home and in food services careers. Students prepare a basic one-topping pizza, fruit pizza, vegetable pizza, and dessert pizzas. Recently I obtained a grant and purchased two outdoor pizza ovens from Good Life Pizza Ovens ([goodlifepizzaovens.com](http://goodlifepizzaovens.com)). Following successful yeast bread and pizza baking labs, students were eager to share their new pizza oven skills with families by offering our first Family Pizza Night, creatively dubbed by students a 'Mozzarella Mash.'"

### Objectives:

1. Incorporate recipes and food skills students can economically use now for their families and apply to careers or jobs.
2. Learn and apply pizza crust ingredients' (flour, yeast, water, sugar, salt, oil) functions and temperatures.
3. Learn and demonstrate pizza dough development and handling techniques: kneading, fermentation, rolling/extending, panning and docking.
4. Demonstrate safe food handling of raw dough and pizza topping ingredients.
5. Safely operate an outdoor gas pizza oven, peel-loading to produce pizza.
6. Calculate quantity of ingredients needed to produce pizzas serving family members registered to participate.
7. Prepare dough, sauce, toppings, demonstrate and assist families to shape and bake pizzas.
8. Plan to include all ages in preparing pizza to experience how baking together is fun, enjoyable, cost saving.
9. Form connections with others using a baked good.



*The cafeteria and outside by the ovens were filled with smiles, laughter and enjoyment. Foods students helped with everyone's families, not just their own.*



**"94% of Americans eat pizza at least once per month, and approximately 8.2 million pizzas are eaten every day in America." Learning to make your own can save a bundle.**

[thepizzacal.com/pizza-consumption-statistics-2022-in-the-usa](http://thepizzacal.com/pizza-consumption-statistics-2022-in-the-usa) retrieved 11/2/22

### National Standards for Family and Consumer Sciences Education [leadfcsed.org/national-standards.html](http://leadfcsed.org/national-standards.html)

#### 2.0 Consumer and Family Resources

- 2.5.1 Analyze the use of resources in making choices that satisfy needs and wants of individuals, families and communities.
- 2.5.4 Analyze practices that allow families to maintain economic self-sufficiency.

#### 8.0 Food Production & Services

- 8.2 Demonstrate food safety and sanitation procedures
- 8.3 Demonstrate industry standards in selecting, using, and maintaining food production and food service equipment.

#### 9.0 Food Science, Dietetics, and Nutrition

- 9.1 Analyze career paths in the food science, dietetics, and nutrition industries.

- 9.3 Evaluate nutrition principles, food plans, preparation techniques, and specialized dietary plans.
- 9.6. Demonstrate food science, dietetic, and nutrition management principles and practices.

#### 13.0 Interpersonal Relationships

- 13.5 Demonstrate teamwork and leadership skills in the family, workplace and community.

#### 14.0 Nutrition & Wellness

- 14.3 Acquire, handle, and use foods to meet nutrition and wellness needs of individuals and families across the life span.



**Mozzarella Mash: A HomeBaking.org Educator Award Lesson by Carla Schaer, Midland HS, Illinois**

## Baking Pizza Resources

**All-American Pizza** [redstaryeast.com/recipes/all-american-pizza/](http://redstaryeast.com/recipes/all-american-pizza/)

**Bake for Funds** How to par-bake pizza crusts; planning tips  
[homebaking.org/wp-content/uploads/2020/11/bakeforfunds-final.pdf](http://homebaking.org/wp-content/uploads/2020/11/bakeforfunds-final.pdf)

**Baking Glossary** Look up key pizza crust terms like *ferment*, *proof* and *docking*  
[homebaking.org/glossary](http://homebaking.org/glossary)

**Dietary Guidelines for Grain (2020-2025)**  
[wheatfoods.org/wp-content/uploads/2021/10/DGA-Shortfall-Nutrients.png](http://wheatfoods.org/wp-content/uploads/2021/10/DGA-Shortfall-Nutrients.png) and  
[GoGrains.org](http://GoGrains.org) #GrainTruth

**Flour and Baking Food Safety**  
[homebaking.org/baking-food-safety/](http://homebaking.org/baking-food-safety/) and  
[namamillers.org/consumer-resources/consumer-food-safety/](http://namamillers.org/consumer-resources/consumer-food-safety/)

**Flour and Wheat 101** [texaswheat.org/wheat-101/](http://texaswheat.org/wheat-101/)

**Gluten-free Pizza Crust** [redstaryeast.com/recipes/homemade-gluten-free-pizza/](http://redstaryeast.com/recipes/homemade-gluten-free-pizza/)



**Grains of Truth Infographic** (plus Pizza Facts)  
[wheatfoods.org/wp-content/uploads/2020/04/GrainsOfTruth\\_Infographic.pdf](http://wheatfoods.org/wp-content/uploads/2020/04/GrainsOfTruth_Infographic.pdf)

**Homemade vs. Takeout Pizza Costs**  
[homebaking.org/wp-content/uploads/2019/07/pizzatakeoutvshome.pdf](http://homebaking.org/wp-content/uploads/2019/07/pizzatakeoutvshome.pdf)

**How Flour is Milled** video and infographic  
[namamillers.org/consumer-resources/what-is-milling/](http://namamillers.org/consumer-resources/what-is-milling/)

**No outdoor oven?**  
Learn How to Grill Pizza – step-by-step and video

[kingarthurbaking.com/blog/2015/06/08/grilled-pizza](http://kingarthurbaking.com/blog/2015/06/08/grilled-pizza)

**Over 95 Pizza Crust Options!**  
Thick, thin, no knead, artisan, grilled, sheet pan, skillet, gluten free [redstaryeast.com/?s=Pizza](http://redstaryeast.com/?s=Pizza)

**Wheat 101:** including Six Classes of Wheat [wheatfoods.org/wheat-101/](http://wheatfoods.org/wheat-101/)

**Where Our Wheat Grows Infographic**  
[wheatfoods.org/wp-content/uploads/2020/04/WheatProduction.pdf](http://wheatfoods.org/wp-content/uploads/2020/04/WheatProduction.pdf)



**Whole Wheat Crust** [homebaking.org/recipe-items/whole-wheat-pizza-crust/](http://homebaking.org/recipe-items/whole-wheat-pizza-crust/)

**Whole Wheat Pizza Crust Recipe**  
[kingarthurbaking.com/recipes/whole-wheat-pizza-crust-recipe](http://kingarthurbaking.com/recipes/whole-wheat-pizza-crust-recipe)

**“How a Mobile Wood Fired Oven Changed Student Lives”**

North Bend H.S. with Chef Frank Murphy [youtu.be/MZt9Aqqt1g](http://youtu.be/MZt9Aqqt1g)

**Wood-Fired University** An opportunity for teachers  
[firewithin.com/wood-fired-university/](http://firewithin.com/wood-fired-university/)

**Yeast Learning Center Resources: Science of Yeast, Activity Test, Tips and Troubleshooting**  
[redstaryeast.com/baking-learning-center/](http://redstaryeast.com/baking-learning-center/)

**Yeast Temperatures** [homebaking.org/wp-content/uploads/2019/07/Temperature for Yeast Bread Production.pdf](http://homebaking.org/wp-content/uploads/2019/07/Temperature%20for%20Yeast%20Bread%20Production.pdf)

## Extra Pizza Challenge

### Calculate the Costs

How much can you save by making your own pizza from the All-American Pizza recipe using cheese and one topping? Compare the costs of making a 12" or 14" pizza with a similar one purchased at a supermarket, a restaurant or pizza chain, and a convenience store.

**If you made your family's pizza instead of buying it, how much could you save over five years?**

## Pizza Terms to Know

Flour	Peel
Ferment	Docker
Staging	Dusting Powder
Sheeter	Oil
Ladle	Divider
Yeast	Food Release



## Five Steps to a Mozzarella Mash – Let's Get Started

Conduct lesson over two weeks unless students are already well acquainted with flour types, food safety, yeast and how it functions in baking a yeast dough product and how to prepare a dough for a pizza crust.

Consult the resource links throughout or on the **Baking Pizza Resources** page for added support.



### STEP ONE: Learn about pizza crust and choose a great formula

Learn or review the flour types and functions of water, yeast, salt, oil and sugar in pizza crust baking.

Review temperatures for yeast baking on the **Resources** page.

Crust formulas: we adapted the [goodlifepizzaovens.com/easiest-pizza-dough-never-fails/](http://goodlifepizzaovens.com/easiest-pizza-dough-never-fails/) Find more options on the **Resources** page.

**Critical thinking:** Explain the function of each pizza crust ingredient.

A: **Flour** typically unbleached enriched all-purpose wheat flour or part whole wheat flour; wheat flour provides the structure for the crust; **water** hydrates or moistens and mixes with flour to form a dough and form gluten (protein) structure that's developed more by kneading/mixing; **sugar** is optional in pizza crust, but provides flavor, crust browning and feeds the yeast; **salt** strengthens the gluten strands, controls yeast fermentation and provides flavor)

### STEP TWO: Get acquainted with flour food safety steps

Review handling meat, poultry, eggs, vegetables and dairy.

Access *Flour and Baking Food Safety* steps from the **Resources** page. Write or state flour handling food safety steps needed for the pizza crust recipe you will prepare.

### STEP THREE: Practice preparing pizza dough

Review the steps for preparing pizza dough, topping the pizzas, and how you will bake the pizzas –in conventional ovens, outdoor ovens or using grills.

Demonstrate how to weigh ingredients, weigh the final dough and equally divide (portion) the dough.

Demonstrate safe use of the pizza oven or baking pizzas on an outdoor grill.

NOTE: Prepare dough 24 hours before baking; use cool (70°F) water.

- Time to practice! Have the students divide into labs to read the recipe/formula, *mis en place* pizza crust dough (check out a [baking mis en place video](#)). Order ingredients for the sauce and toppings.
- Check each lab's *mis en place* before they start.
- Wrap dough balls with room for expansion and rest them as directed or refrigerate overnight; prepare sauce if time allows or outline next steps for Day 2.

Practice preparing the dough, panning, [docking](#), topping and baking the pizzas.

**Critical thinking:** Name three times it is essential to wash surfaces and hands.

A: before beginning to mix dough; after measuring/mixing/kneading/handling raw dough; and before the baked pizza is cut and served

**Critical thinking:** Why does it matter if you measure accurately with volume tools or by scaling ingredients for dough, toppings and to divide the dough?

A: Scaling and portion sizes are important to produce the best quality pizza crust every time, control costs and to be sure the pizzas will bake the same in the oven.

**Optional: Scoop, Spoon and Scale** learning activity ([PDF](#)) ([video](#)) If needed, demonstrate how to measure and scale ingredients.

### STEP FOUR: Create a Mozzarella Mash sign up

- What days of the week are attendees most likely to come?
- Will you charge a fee?
- When do you want the responses returned for planning?
- How much lead time should you give for the invitation sign-up and RSVP?
- Will you need to charge a fee and how much?
- Who should be invited besides families?
- Will you offer gluten- or dairy-free options? (Costs may prohibit?)
- Use the **Sample Invitation** and **Sample Tally Sheet**
- Identify other need-to-know questions.

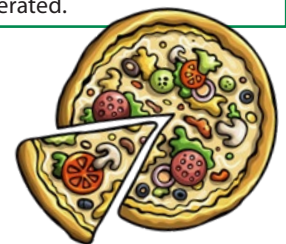
**Critical thinking:** How will you promote the opportunity? Is it for family members of our class only? Should you include other guests or school staff who help in your class? How many could you accommodate? Review the **Sample Sign Up Form** and see what needs to be added.

### STEP FIVE: Determine how much dough and toppings will be needed, based on responses

Plan on one pizza per guest. Decide where and how to hold and serve the ingredients for the event.

- Do you have adequate refrigeration and/or freezer space?
- Will the cafeteria allow you to use their salad and food holding tables if needed? If possible, invite the school food service manager to demonstrate how to use the tables and food safety directions.
- How many guests are expected? \_\_\_\_ guests
- How much dough will each guest need for an individual 8"-10" pizza? \_\_\_\_ oz.
- How much total dough is needed? \_\_\_\_ oz. (*number of crusts x amount of dough for one pizza*)
- How much sauce is needed? \_\_\_\_ quarts/gallons (Can you prepare the sauce ahead and refrigerate or freeze?)
- What toppings will be provided? How much of each topping is needed? (Toppings will be prepped in class the day of the Mozzarella Mash.)
- Divide and assign preparation tasks.
- Remember: the dough needs to ferment/rise for *at least* 2 hours before rolling out but ideally 24 hours ahead of baking and refrigerated overnight.

**Critical thinking:** If you have leftover pizza crust dough it can be rolled out, [par-baked](#) and sold to people to bake at home, or baked for the teachers the next day. Place dough balls in proofing tubs, wrapped with plastic wrap and refrigerated.



## Details from our Mozzarella Mash

### Two or three days before:

- Use RSVP guest list to calculate number of dough and sauce recipes needed.
- We shopped for the ingredients the weekend before the Mozzarella Mash.
- List all preparation tasks and divide between lab groups
- Do you want to have other menu items? Several parents donated chips or snacks to eat along with the pizza. The students made four different kinds of cookies the day before in class for their guests to eat. Water and lemonade were provided.

### One day before:

- We prepared a few extra pizza dough balls in case guests wanted seconds.
- Since the dough needed to ferment/rise for a minimum of 2 and up to 24 hours, the dough was made the day before using 70°F water, divided and formed into dough balls, loosely wrapped in plastic and refrigerated.
- Lab groups prepped the toppings and put into containers for the salad bar. Each container was labeled and dated and stored in the cafeteria refrigerator.
- Students made pizza sauce.
- Special diet needs: One student's family was gluten free, so she brought in GF flour and made a batch of pizza crust for her family. Another was dairy-free and provided DF cheese.

### Day of the Mozzarella Mash – Reminders and Tips for Success!

- We began at 5:45 p.m., and guests arrived every 15 minutes, 3-4 families in at a time.
- Each person rolled out a dough on a plastic cutting board so the metal pizza peel could slide under it to pick up the pizza.
- Students demonstrated how to roll and dock the dough to avoid air bubbles in the crust.
- After rolling and docking the dough, we took the crusts to the topping bar where students demonstrated topping. Experience says: if you overload your pizza your crust will not get done as well as it should.
- Families walked their pizzas out to the ovens. Ovens were set to 700°. For safety, students with experience loaded pizzas into ovens with a floured metal peel. A pizza was placed inside the oven for 1-1½ minutes and then rotated, baking for another 1-1½ minutes on the other side.
- When the pizza was done, students used another metal peel to place the baked pizza on a wooden peel to be cut.
- Food safety tip: Do not return baked pizza to the surface the raw pizza was carried on.
- Once cut, the pizza was put on an unused paper plate for the families and guests. Families ate together in the cafeteria.
- We assigned students to return plastic cutting boards back to the kitchen to be washed and used again for another family to start making their pizzas.

### No Outdoor Ovens? Options!

You can do the Mozzarella Mash even if you don't have outdoor ovens: preheat conventional ovens to 475-500° and add more time. You can also grill pizzas; check out the blog and video at [redstaryeast.com/blog/homemade-artisan-grilled-pizza-crust/](http://redstaryeast.com/blog/homemade-artisan-grilled-pizza-crust/).

