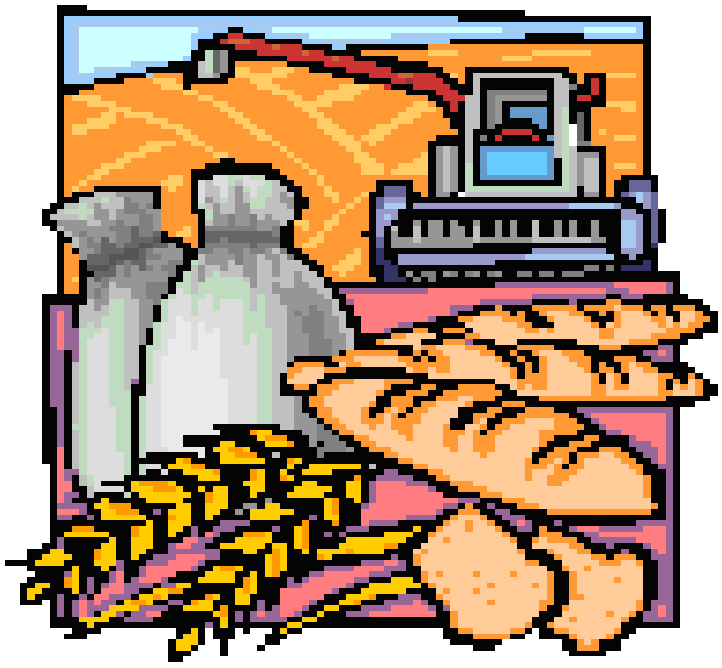
Baking Culture: Yeast Science Focaccia



Lab Goal: Students will explore flat breads enjoyed in many cultures for thousands of years. The science of yeast in baking flatbreads will be applied, focusing on critical temperatures in the major steps of focaccia production. Students will examine the health and wellness value of flatbreads and cultures that commonly share meals with family and friends.

Pablo Picasso
Woman with Loaves

Introduction:
Bread takes many shapes, but the easiest of all is **flat** in appearance. The earliest breads humans baked were flat. Why flat? Were they flops? No! Flatbreads were easy on resources (fire for fuel; time), sometimes replaced eating utensils (medieval "trenchers"), and often included locally grown ingredients. Early flat breads were baked more than 8,000 years ago by Stone Age Swiss Lake dwellers. The first flatbread recipe was simple: pound grain, mix with water and bake on heated stones. Salt added flavor. Yeast found it's way into the "mix" later with the Egyptians. All around the Mediterranean Sea, flatbreads became a daily staple, religious symbol and basic to health and life. **Focaccia** was one of these breads—made long before yeast was used in baking.

View a wide variety of flatbreads, including focaccia, at *The Cook's Thesaurus*.
www.foodsubs.com/Flatbread.html

Focaccia (foh-KAH-chee-ah) is derived from the Latin word focus or hearth, and originates from how this bread was baked—on hearth stones. Today, bakers still bake focaccia in hearth ovens—some of which are "wood-fired!" During the day, while baking and cooking for larger meals, focaccia was prepared as a light snack for the baker and his or her family. Focaccia may look like it's later cousin pizza, but this thin, chewy bread is seasoned and topped sparingly with olive oil and herbs.

Flatbreads can be leavened or unleavene and are found in many cultures.
Q: Can you name another flat bread? Do you know what culture or country developed it? Have a world map or globe and place the breads in their region or country.
A: (Middle Eastern) barbari, lavash and pita; (Jamaican) cassava bammy; (Hispanic) corn and flour tortillas; (Italian) focaccia or schiacciata; (Scandanavian) potato lefsa; (Indian) chapatti, roti, and naan; (Ethiopian) injera; (Hopi) corn flat bread; (Early American) cornmeal hoe cakes. Every one seems to have a type of pancake!

Critical Thinking Corner:
Q: Why would flatbreads be the first and most frequently baked bread?
A: Less fuel needed for baking (shorter baking times), easy mixing and shaping, very simple baking equipment—in short, they are very economical… an early fast food!

Flatbreads are Flatly Nutritious! Flatbreads are a staple because they are nutritious. Read the recipe for Focaccia together. Write an ingredient list for the Focaccia recipe as if you were going to make a package label. (Teacher Example: Show an ingredient list on the package label of another baked product)

Critical Thinking Corner:
Q: Where do flat breads fit on the Food Guide Pyramid?
A: Base/grain group
Q: Which *macronutrient* are breads highest in, fat, protein, or carbohydrates?
A: Carbohydrates
Q: Are the "carbs" from simple sugars or complex carbohydrates and fiber?
A: Complex carbohydrate and dietary fiber
Q: Why are carbs so important to health? We need 50-55% of our calories from carbs (grain foods, fruits, veggies, dry beans) everyday.
A: Carbohydrates fuel muscles, brain, metabolic functions, improve disease resistance and provide dietary fiber for healthy digestion)
Q. What *micronutrients* (vitamins, minerals) do whole grain and enriched breads provide? (Note: Not all are listed on the Nutrition Facts Label)
A: Enriched breads provide niacin, thiamine, riboflavin, folic acid, fiber and iron. Whole grain breads provide many additional phyto (plant) nutrients and fiber for health and disease risk reduction.
Q: Based on the recipe and ingredient list you wrote, is focaccia a high fat food? Is it a sweet (high in sugar) bread?
A: No and No. If possible, have students computer analyze the recipe for a complete list of nutrients.
Q: How could you make the focaccia "whole grain?"
A: Use whole wheat flour for at little over half (51% or more) of the total flour.

More grain food nutrition information at:
The Bell Institute, www.generalmills.com/wholegrain
Get on the Grain Train, www.usda.gov/cnpp
Healthful Whole Grains, www.oznet.ksu.edu/library/fntr2/F2560.pdf
USDA/HHS, www.nutriton.gov and www.mypyramid.gov
Wheat Foods Council, www.wheatfoods.org

Critical Thinking Corner: Foods like focaccia are part of the *Mediterranean* tradition of enjoying fresh, well-prepared foods in a relaxed atmosphere, often shared with family or friends. Researchers report eating meals together is important for better health, nutrition, relationships, child development, school performance and more! *Five times a week* is considered the minimum by researchers at Cincinnati Children's Hospital.*
Discussion:
1. How often do you sit down and enjoy a meal?
2. Do you turn off the TV and talk about the day or tomorrow's plans? Why or why not?
3. How could you, or do you, help make this happen? ("60% of FCCLA students help prepare family meals at least once a week." 2005, Home Baking Association)

***Teacher Note: More on Eat Together Eat Better at:**
http://nutrition.wsu.edu/ebet/toolkit.html

Need-to-Know Ingredients.

Activity: Focaccia Trivia Game

Flat breads are almost all crust and very little crumb. (See Glossary). American breads tend to be mostly crumb, and almost no crust. Let's learn more about Focaccia…

1. Assemble the following ingredients and items to show and use for the Focaccia Lab.
2. Cut the Trivia Facts into strips and place in a bowl or hat. Laminate if desired.
3. Have students draw a "Trivia Fact" from a bowl and find the related food item on the table. They should tell which food group the item is from on MyPyramid, then read the Trivia Slice. Download at www.mypyramid.com

Focaccia Ingredients to Show and/or Include:

Enriched all-purpose flour, unbleached
Whole wheat flour
Olive oil
Picture of olive trees/orchard
Romano Cheese
Parmesan Cheese
Mozzarella cheese
Provolone Cheese
Pepperoni (turkey for less fat)
Ripe olives (chopped)
One loaf of focaccia
Herbs (fresh or dried, but not ground)
Fresh Basil
Rosemary
Parsley
Whole garlic bulbs
Whole yellow and/or red onions
Cheese pizza package (12 inch or medium) with nutrition and ingredient list
Roma tomatoes—fresh and/or dried.
Red grapes (seedless)
Salt
Yeast, active dry and fast rising
Pitcher of water
Map of Europe and Mediterranean region

More on olives:
www.wellaid.com/olives

Trivia Facts: Cut into strips and place in a bowl.

1. Parmesan must age 10 months before it is grated and sold.
2. Provolone Cheese has been aged until it is somewhat dry and hard.
3. Romano cheese is made with sheep's milk. It is not as sweet as Parmesan.
4. In America, mozzarella cheese is a favorite on pizza and is made from cow's milk. In Europe, it may also be made from water buffalo milk and in Australia, from sheep's milk.
5. Pepperoni is America's favorite pizza topping. In Japan, eel and squid are favorites and Australians enjoy shrimp and pineapple.
6. *Focaccia alle peperoni* is focaccia topped with sliced, roasted or grilled sweet red or green peppers.
7. Americans are just beginning to enjoy focaccia. Italy has baked it for over 2,000 years.
8. Pizza comes from both the Romans (*placenta)* and Greeks (*picea*.) (Greeks settled in southern Italy). Both indicate a round, pie-shaped bread with black crust from the ashes in the hearth ovens.

9. Tomato and cheese pizza, popular in America, was created only about 100 years ago for the pizza loving queen of Italy, Margherita.
10. The first pizzeria in the U.S. was opened in 1905 in New York City by Gennaro Lombardi. Today there are more than 58,000 pizzerias in the U.S. and Americans eat about 75 acres of pizza daily—7½ pizzas per person per year.
11. Pizza is to Naples what *focaccia* is to Genoa. In Florence, flat breads like focaccia are called *schiacciata* (crushed or squashed bread). (Locate cities on a map of Italy)
12. Unlike pizza, focaccia is not a meal. It is sparingly topped with herbs, salt, a little garlic, thinly sliced onion, grilled peppers, tomato slices, olives, hard grated cheese, and drizzled with oil.
13. Focaccia and pizza crust are leavened with yeast—a living plant (fungus family). Yeast is killed at 140 degrees F., so it is important to take the temperature of liquids before mixing them with yeast. Liquids should be 120 degrees F. or less—as directed by the recipe.
14. Romans were some of the earliest to mill and sift wheat into white flour. The coarse bran was used for the slave's bread. Today, we use unbleached enriched flour in many breads.
15. Enriched unbleached flour that is 11-12% protein (may be all-purpose or half bread flour/ half all-purpose) is most often used for baking focaccia. It contains twice as much folic acid as whole wheat flour.
16. Whole wheat flour has all the parts of the wheat—the bran, germ and endosperm, so it contains nutrients and fiber not found in enriched flour. Half (50%) or more of the flour in bread can be whole wheat.
17. Tomatoes (*pomodoro*) were ***not*** used on either focaccia or pizza until Columbus returned with them from Peru and Mexico. Italians were suspicious of tomatoes and they were an optional ingredient until the mid-18th century.
18. Red seedless grapes—during grape harvest fresh grapes may be pushed into the dimpled dough just before baking. This is known as *schiacciata alle 'uva.*
19. Garlic cloves—cloves are the individual segments of the bulb. Peeled cloves, minced and then added to the oil brushed on the focaccia, lends a rich flavor.
20. Olives—10 lbs of olives are required to produce one liter of olive oil.
21. Olive trees were first grown in the Mediterranean and Middle East. They are an evergreen. There are 57 million of them in the Middle East. An olive tree produces 41-54 lbs. of olives each year. An olive branch is a symbol of victory and peace.
22. Olive oil is used by Mediterranean civilizations as food, body lotion, medicine, antidote to poison, laxative and in religious ceremonies.
23. Olive oil is high in monounsaturated fats that help maintain healthy arteries. It is considered a "heart-healthy fat." Although it is a "good fat" choice, it still has 9 calories per gram, just like any fat.
24. Black (*Ligurian*) olives or a combination of black and green are pitted and pushed into the indented dough just before baking.
25. Finely sliced and sauteed yellow onions, salt and olive oil may be used to top focaccia. (*focaccia alle Cipolle)*
26. Staple food—an important food item made, grown or consumed in a particular place, region or country.
27. Salt is very important in bread baking to control yeast fermentation and adds flavor.
28. Coarse sea or Kosher salt is often sprinkeld on the surface of focaccia along with oil and herbs.
29. Water is essential in bread making. It hydrates or moistens the flour so the proteins (glutenin and gliadin) can form the dough's expandable gluten structure.
30. Yeast is the leavener in focaccia and pizza crust. Without it, the dough will not ferment and produce the carbon dioxide (CO_2) that gives the crumb and crust texture and flavor.
31. Bread dough must be kneaded/mixed to develop a smooth and elastic dough.

Multiply the Learning

Research and write the history of a food ingredient.

1. Assign each student or student teams an ingredient and have them research its history and production on the internet and/or library. (Use “Ask Jeeves,” “Google” or other search aides. Simply type in “history of basil” or other ingredient name.)
2. Require students to write and orally report their findings to the class.
3. Have students identify where the ingredient is purchased and its nutritive value and health benefits.

Marketing Focaccia.

4. Have students write an ad or marketing slogan to convince the teacher or class to try focaccia for the first time. Include a plan for using a spokesperson, event or other “tie-in” with the product to increase it’s consumer appeal.

Extend the class.

5. Develop a fictional story for younger children to help them learn about a bread or ingredient.
6. Assign a student to check out and report on a children’s book such as:
   Bread Comes to Life. Book and 22-minute video. www.breadcomestolife.com OR 800.827.0949.
   Everybody Bakes Bread. Norah Dooley
   The Little Red Hen. Tell-A-Tales. Western Publishing Company
   The Sleeping Bread. Stefan Czernecki and Timothy Rhodes
   This is the Bread I Baked for Ned. Crescent Dragonwagon
   Walter the Baker. Eric Carle

Book and Bake: Invite a younger group of students to read or hear a student’s story and bake Focaccia with the older students.

INGREDIENT LAB: Yeast Science

Before you start: Flat breads were being made long before the Egyptians baked with yeast between 2,000 and 3,000 B.C. Following the discovery of yeast, bread flavors and texture were improved. In the U.S., yeast was first grown, harvested and packaged for baking in 1868 by Fleischmann brothers and James Gaff. In 1876, French scientist Louis Pasteur discovered yeast causes fermentation. Yeast consumes sugar and oxygen and produces alcohol and carbon dioxide which are important in both baking and wine production. In 1942, dry yeast was developed especially to help feed troops in WWII. Today, we have wonderful dry yeasts—active, bread machine, fast rising or instant. Some bakers still use compressed, or fresh yeast. Learn more about what yeast needs for fermentation.

Visual aid: ***Bakers Dozen***. Yeast Segment. DVD. 2005. Home Baking Association.
www.homebaking.org

Yeast Test 1: Yeast is a living fungus. It requires food, warmth and air for growth.

Question: How will yeast growth vary when fed water, sugar, flour, salt or nothing?

Control: Water amount (1/4 cup/2 oz) and temperature (100-105°F) added; use same yeast container and temperature (105°F).
State your hypothesis for each bowl.

What you'll need:
Five identical bowls or liquid measuring cups
Food (insta-read) thermometer
1 qt. warm water, 100-105 °F.
Five teaspoons active dry yeast
Sugar, salt, flour, cinnamon

Instructions:
1. Using five 1 cup measuring cups or identical bowls measure
Bowl #1: 1 teaspoon active dry yeast
Bowl #2: 1 teaspoon active dry yeast+1 teaspoon sugar
Bowl #3: 1 teaspoon active dry yeast+1 teaspoon flour
Bowl #4: 1 teaspoon active dry yeast + 1/4 teaspoon salt
Bowl #5: 1 teaspoon active dry yeast+1 teaspoon cinnamon

2. Measure and record the temperature of the water and the room.

3. Measure 2 oz. (1/4 cup or 65ml) water into each bowl. Add yeast and other ingredient as required.

4. Stir to completely moisten the yeast in each bowl. Scrape each spoon as needed. Do not stir again.

5. Observe and record yeast activity in each bowl at timed intervals—5, 10, 15, and 30 minutes.

6. Record or chart your observations.

Learn much more about yeast:
Fleischmann's Yeast: www.breadworld.com
Home Baking Association: www.homebaking.com
King Arthur Flour www.kingarthurflour.com
Red Star and Lesaffre Yeast: www.redstaryeast.com

7. Write a one-page report of what you observed and why the yeast grew as it did in each bowl/ cup.

<u>Yeast Test 2:</u> Impact of Water Temperature on Yeast

Question: Yeast is a living fungus. What impact on growth will water temperature make?

Control: Ust the same type of bowl; type and amount of yeast; and sugar.

Variable: Temperature of water
State your hypothesis for each bowl.

Instructions:
1. In five bowls, measure 1 teaspoon active dry yeast and ½ teaspoon sugar.

2. Prepare five 1 quart pitchers of water—Cold (50-65 °F); cool (65-75° F.); lukewarm (95 to 105°F); warm (105 to 115° F); very warm (145 to 155° F) and boiling (212 °F)

3. Stir ¼ cup water using a different temperature water in each bowl. Label each bowl with the water temperature used.

4. At 5, 10 and 15 minute intervals observe and record what you see in each bowl.

5. Touch the water in each pitcher. Can you tell which ones would be warm enough for good yeast growth? Which ones would retard or kill yeast? Describe why it is important to use a thermometer to measure liquid temperatures when working with yeast?

Report: Have the class discuss each outcome or prepare a report. Include what was observed and whether the hypotheses for each bowl was correct. If not, why? Was touching the water to see if it was the right temperature accurate enough? Why or why not?

Post or provide the temperatures on the following page for the students to use.

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King Arthur Flour www.kingarthurflour.com
Red Star and Lesaffre Yeast: www.redstaryeast.com

Temperatures for Yeast Bread Production

34° F.	Yeast will not grow below this temperature
60°F.	Do not serve bread at a temperature below 60°F.
78°- 82°F.	Recommended temperature of dough after mixing when made with active dry yeast
82°- 88°F.	Recommended temperature of dough after mixing when made with instant (fast rising) yeast
80°- 85°F.	Desired temperature for fermentation
90°- 100°F.	Desired temperature for proofing
90°- 100°F.	Internal temperature of bread when ready to wrap; lower temperatures result in drying out of bread
95°- 100°F.	Temperature for re-hydrating active dry yeast
140°F.	Temperature at which yeast is destroyed
200°- 210°F.	Internal temperature of bread when baked to correct degree of doneness

BAKING LAB: Basic Focaccia

Options:
A) 1-day Fast Rising Method: 90 minutes
B) 2-day Refrigerated Method: 2 hours, 45 minutes (2 labs)
Note: Dough may also be prepared in bread machines.

Dough Preparation: 15 minutes; resting time 10 minutes
Shaping 5 minutes; rising time, 15 minutes.
Baking Time: 20 to 25 minutes
Cooling Time:10 to 15 minutes, serve warm
Yield: One large (14-inch) or 2 medium flat breads—16, (1.8 oz) slices

Focaccia Dough Ingredients	**Measure**	**Weight**
Active Dry Yeast OR Fast-rising yeast	1 ¼ teaspoons	1/8 oz (3.5g)
Granulated sugar or honey	1 to 3 teaspoons	0.45 oz (12g)
Water (measure temperature)	1 cup	8 oz (250 ml)
Option A—120°F		
Options B—80°F		
Unbleached all-purpose or bread flour	2 ¾ to 3 cups	10-12 oz. (280-335g)
Olive or vegetable oil	2 tablespoons	1 oz (28g)
Salt	1 teaspoon	1/6 oz (5g)

*Flour may be half whole wheat flour; if using bread flour, lesser amount may be used

Topping ingredients
1 large red or white onion—peeled, washed, thinly sliced in rings, sautéed or carmelized
1 to 2 tablespoons fresh rosemary or basil (or 1 ½ teaspoons, dried but *not* ground)
Olive or vegetable oil (about 2-3 tablespoons)
Salt (may be coarse or kosher)
Options: 2 oz. ripe (black) pitted olives
1-2 cloves (1/4 teaspoon) minced garlic mixed into the olive oil
2 oz. grated hard cheese (Parmesan, Provolone)
2 roasted or grilled green or red bell pepper slices
Sun-dried tomato pieces, softened in olive oil

Directions:
1A: Fast-rising Method: In a medium mixing bowl, fast-rising yeast, sugar, water and 2 cups (8 oz) flour. Stir in the oil and salt and enough remaining flour to form a rough, ***sticky*** dough ball. Mix 2 minutes by hand or with mixer.

1B: Two days: Mix ¼ cup (2 oz) of the (80°F.) water, yeast and sugar in the mixing bowl. Let ferment about 5 minutes, until it begins to foam. Stir in the remaining 3/4cup (6 oz) water, 2 cups (8 oz) flour, oil and salt. Stir in enough remaining flour to form a sticky dough ball. Mix 2 minutes, by hand or with mixer.

HELP:
Bread flour will absorb more moisture then all-purpose becuse of its highter protein content. If dough is too stiff (dry) or hard: knead in water, 1 tablespoon at a time to moisten (hydrate) the dough. If the dough is too wet, add a tablespoon of flour at a time - dough should be moist (soft) but not sticky wet. As dough ferments, it will also become less sticky.

2. Knead by hand or with mixer:
By hand: Measure ½ cup more flour, using a little at a time to knead, until a soft, smooth and elastic dough forms. (Knead 5-8 minutes).
With mixer: Dough may need up to ½ cup more flour if dough is wet and very sticky. Mix on medium low speed with dough attachments for about 7 minutes. TIP: Dough should form a rough dough ball at first around the mixing attachment, then mix to form a soft, silky smooth dough ball that cleans the mixer bowl.

3. Form kneaded dough into a smooth ball. Lightly oil the surface of the dough.
1A, Fast-Rising Method: Turn the bowl over the dough and let rest for 10 minutes. Prepare/assemble the toppings you will use. Go to Step. 4.

1B, Two Day Method: Spray large, clean plastic food bags with pan release spray. Place rounded dough ball in the bag. Squeeze out the air, tie shut at the very top of the bag, and refrigerate.
Dough may need to be punched down once after an hour; re-form into a smooth ball.
Day 2: Remove dough from refrigerator, punch dough down; bring to room temperature (about 1 hour).

4. Grease or spray large 14-inch pizza pan, sheet pans or 9 X 13-inch cake pans. Pizza stones may also be placed in the oven, but do not grease.

5. Flatten the dough pieces with hands into oval(s) about ½ to 1-inch thick. Place in the pan(s), cover lightly with plastic wrap sprayed with pan spray. Let dough rest in a warm (95 to 105° F.) draft free place. (You may need to place a pan of boiling water in the bottom of an oven or microwave) for 15 minutes. NOTE: Hotter is not better!

6. Dimple the dough by pressing fingertips into it all over, about ½-inch deep.

7. ***If time allows***, cover the dough lightly again and let rise again, 15 to 30 minutes in a warm place. Prepare the toppings of choice while the dough rises.

8. Place racks in lower third of oven. **Heat to 425°F.** Drizzle the oil over the dimpled dough and sprinkle with choice of toppings and salt.

9. Bake until golden, 15 to 20 minutes—varies with thickness.

10. Cool briefly, then remove bread to cooling rack to avoid soggy crusts. Serve warm wedges, with olive oil or garlic oil for dipping.

For a crustier focaccia:
Steam in the oven creates a crustier bread.
Use a plant spray bottle used just for baking.
Spray the bread before baking and the oven walls three times while bread bakes.

Storage: DO NOT REFRIGERATE. Freeze baked focaccia in food grade freezer bags for up to 3 months. Unwrap and reheat in hot (400°F.) oven until crisp, about 7 minutes.

Nutrition Information: 1 of 16 slices (2 oz—56g) made with 1 c. whole wheat 2 c. all-purpose flour, 1 yellow onion, olive oil, salt and fresh basil leaves provides: Calories, 120; Total fat, 4g; 0 Sat fat; 2.5g Mono fat; Cholesterol, 0mg; Trans fats, 0; Total Carbohydrates, 22g; Dietary fiber, 2g; Sugars 0g; Protein, 3g; Sodium, 220 mg; Potassium, 53 mg; Iron 1.5 mg; Niacin 1.7mg; Riboflavin 0.1mg; Folate, 40 mcg; Thiamin, 0.15mg; Vit. C 0; Vit. D 0; Vit. E, 0.4 mg

<u>Extra credit:</u> BAKING VOCABULARY (Review in Terms & Techniques)
On a copy of the recipe, label the steps in the margin with the following terms:

Scaling Ingredients	Intermediate proof	Baking	Make-up
Mixing	Molding	Punch dough	Storing/holding
Fermentation	Panning	Cooling	Proofing

COSTING: The package cost and size of package for each item will be provided.
What would you charge for one large (14-inch) loaf of focaccia? "Mark-up" should be 125 percent.

Flour (5 lb)	$
Olive oil (___ oz)	$
Sugar	$
Salt	$
Herbs	$
Coarse salt	$
Dried tomato, onions, peppers	$
Cheese(s)	$
Food packaging	$

Consumer Taste Testing:
Develop a ½-page survey for a consumer group, ***or*** use the one on the next page (A Matter of Taste) in your school or community. Set up a taste test with the group to determine consumer taste preferences for focaccia. Offer them several types of focaccia, appropriately named.

Ex: Crusty basil parmesan focaccia
Olive basil focaccia
Onion garlic focaccia
Provolone and Sun-dried tomato focaccia
Whole grain onion and rosemary focaccia

Consumer Taste Test Sample Evaluation Form

A Matter of Taste

Product Tasted: _____ Lab group:_____ Date: _____

I think the food product tastes:
____very good _____good _____okay but not my favorite _____needs improvement

The food tastes:
___sweet ___bitter ___salty ___sour ___not what I expected ___ just right

The color is:
_____ great _____ too pale _____ too dark _____ not right for the product

The aroma (smell) is:
_____ too strong _____ too weak _____ just right _____ not good

The food looks:
_____ yummy _____ okay _____ not good

I would enjoy eating this food again. _____ yes _____ no _____ maybe

Comments:

_____

_____

NOTE: **Questions may include rankings**:

- For lower grades, use rankings of 1 to 3.
- For junior high to high school age or adults, use rankings of 1 to 5.
    1. ***Make it clear whether 1 is a top ranking or the lowest!***
    2. **Get responses for things such as**:
        - Chewiness of crust
        - Flavor
        - Preferred toppings
        - Acceptability of whole grain product?
        - When would they eat this bread?
        - Would they use it for sandwiches?
    3. **Tally** the responses. Would the product sell well as it is? What adjustments might you want to make? (Teacher note: Consumer taste survey categories should rank 67% or higher befor a category is ready to go to market. Below 67%, the category needs improvement.

Challenge for Higher Level Thinking: Food Labeling

- Write a **product label** for the bread as it would need to appear for sales.

Include:

- *Net weight, ingredient label, nutrition facts label*
  Be sure to weigh and list the total loaf net weight as well as the weight of one recommended serving with the nutrition information.
- Is there a *health claim* you might include on your label? (Whole grain; low in fat) Go to www.cfsan.fda.gov/label.html for label guidance and health claims that may appear on food labels.
- Include the *price*, *how to handle or store* the product.

Focaccia Evaluation

Name(s): _____ Date: _____ Hour/Lab:_____/_____

1. Focaccia is considered what type of bread?
   Name one other bread from this family:

2. What was different about the focaccia dough from other bread dough?

3. What temperature was used for water that is directly mixed with the yeast?

4. Describe how the focaccia was shaped? What was the thickness of the dough?

5. How did you develop a warm place for the shaped dough to rise (proof)?

6. What special treatment is done on top of the shaped dough?

7. List three toppings that may be used on a focaccia.

8. Compare and/or contrast the focaccia to the following breads/foods:
   a. Loaf of bread
   b. Pizza

9. Describe the texture of the focaccia.

10. Explain one thing you learned about yeast in this lab.

Answers:

(1) flat bread; naan, tortilla, injera, hoe cakes, lavash, pita (2) less fat and sugar (3) From 80-120°F., depending on method and type of yeast (4) Flat oval shape, about ½ -1- inch thick (5) Place steaming water in oven; place in a warm microwave (do not turn either on!) (6) Dimpling; use fingertips to make deep indentations (7) thin onion slices, fresh basil, olive oil, salt (8) Loaf bread has lots of soft crumbs and very little crust (focaccia is the opposite). Pizza usually has a variety of toppings and focaccia has only several toppings. (9) Chewy, coarser than loaf bread (10) yeast is alive; it dies at 140°F.; won't grow in salt water

Resources and Credits:

Baking for Success lesson and video, Home Baking Association. Sharon Davis. www.homebaking.org
Focaccia: The Italian Cousin to Pizza. 2003 Home Baking Association FACS Educator Award winners. Cecilia Marcinlovich and Amy Saunders, FACS Food & Nutrition Teachers, Portage Township, Portage, IN.
Kansas Wheat Commission recipes. www.kswheat.com
King Arthur Flour. www.kingarthurflour.com
The Bread Book. Linda Collister & Anthony Blake. 1993. Sedgewood Press, NY, NY.

Check the library for additional resources:

Artisan Baking Across America. Maggie Glezer. 2000. Workman Publishing. ISBN 1-57965-117-8
Bread, Bread, Bread. Ann Morris. (Juvenile). Photos, Ken Heyman. 1989. Mulberry Books, William Morrow and Co. ISBN 0-688-12275-2
Rediscovering Egypt's Bread-Baking Technology. National Geographic. January 1995.
The Best Pizza is Made at Home. Donna Rathmell German. 1994. Nitty Gritty cookbooks. Bristol Publishing. ISBN 1-55867-094-7
The Italian Baker. Carol Field. 1985. HarperCollins. ISBN. 0-06-181266-8.
Baking with Julia. Dorie Greenspan. 1996. William Morrow and Co. ISBN 0-688-14657-0

Video:

Bakers Dozen. DVD. 2005 Home Baking Association www.homebaking.org
Baking for Success. Video plus focaccia lesson. www.homebaking.org