

Dough Sculpting 101



Tips for Shaping Success

- **Wash hands and surfaces well**
- **Select up to three options** to prepare with each third (1¼ lb) of the Refrigerator Potato Dough (recipe on page 2).
- **Shaping:** Divide Refrigerator Potato Dough recipe (or favorite dough, making 3 to 3¾ lbs) evenly into dough pieces as directed by the option chosen. Place same-sized products on the same pan, spacing as directed.
- **Everyone will want their own edible art...** Tuck a small piece of paper with the baker's initials under the edge of their dough art before baking OR, bake on parchment paper with name noted by the product.
- **Baking:** Cover each pan of shaped dough *lightly* with sprayed or oiled plastic wrap. To proof, place in warm (95-105° F.), draft-free area until double in size, about 45 minutes. Bake as directed. If edges become too brown, lay a piece of aluminum foil lightly (tent) on baking dough. Internal temperature when done is 190-210° F. Cool on wire racks.

Edible Art

Single Knot Rolls, bake 12-15 minutes at 375° F.

1. Cut a 1 to 1¼ lb/565g dough piece into 12 even pieces. Roll each piece into a log roughly 4 inches long.
2. Tie the dough in a simple knot, leaving one end in the center of the top and tucking the other underneath.



3. Place on a lightly greased or parchment-lined baking sheet. Cover, proof and bake.



Double Knot Rolls, bake 12-15 minutes at 375° F.

1. Cut a 1 to 1¼ lb/565g dough piece into 12 even pieces. Roll each piece into a rope 8-inches long. Make a loop with the top half of the dough, giving the closed end a half-inch overlap of dough.



2. Turn this loop over so the long piece is on top. Wind the long piece behind the overlap, and bring the end back up through the loop to make a figure 8.
3. Place on a lightly greased or parchment-lined baking sheet. Cover, proof and bake.

Illustration Source: *The King Arthur Flour Baker's Companion*, The Countryman Press, 2003. kingarthurfLOUR.com

Sculpt Cookies, too!

Recipes and how-to-shape on *Dough Sculpting 101 DVD*



The Tortoise and the Hare Youth Educator Award Winner

Lauren Parks, Bloomington, IL, returned from the Home Baking Association's National 4-H Congress baking workshops ready to teach other youth what she learned.

"This workshop was fantastic and I thoroughly enjoyed participating in learning how to make bread. The workshop instructor taught us how to measure ingredients properly, combine ingredients correctly, how to knead dough, how to shape the dough into loaves and other shapes, to make an egg glaze, how to bake the bread and know when it was baked completely, and how to give generously to others by donating some of our baked products! Now, that was a worthwhile workshop in which to spend 90 minutes!

Immediately, when I arrived home from Atlanta, I told my mom that the bread-making instructor had challenged each of us to enter this Educator Award contest." - Lauren Parks

Lauren incorporated a baking lesson into the volunteer work that she does with children for this entry. Children are still talking about all the fun they had and how much they learned about baking bread! Park's lesson included:

ARTS - Dough sculpting is a creative, unique, tactile medium

INSPIRATION - Gain confidence; learn new skills

LANGUAGE - What are kneading, shaping and baking? More baking terms, HomeBaking.org/glossary/index

LITERACY - Read the recipe plus Aesop's Fable, *The Tortoise and the Hare*. What does the fable mean for the two main characters?

MATH - Sequencing, measuring, proportions, scaling
Measure UP! Worksheet, HomeBaking.org/PDF/survey/measure_up_final.pdf

SCIENCES - Ingredient functions, sensory (taste, smell); cause and effect, HomeBaking.org/PDF/What_Happened_to_the_Yeast_Bread.pdf

Leavening science, redstaryeast.com/science-yeast/ and HomeBaking.org/PDF/bakingsodavsbakingpowder.pdf

SERVICE - Bake Sale for No Kid Hungry, gabs.nokidhungry.org
Bake for Good, kingarthurfLOUR.com/bakeforgood/docs/Bake-For-Good-eBooklet.pdf

Tips for Shaping Success

Yeast dough for shaping will be:

- a silky texture, be properly developed – elastic and moist but not “tacky” or too sticky.
- placed in an oiled, sealed food bag or container, deflated, rounded and rested in refrigerator or at room temperature (68°-72° F.).
- relaxed, extensible (can be rolled or extended without springing back).

To achieve shaping success:

- **Develop the gluten**, mixing or kneading, until the dough cleans the sides of the bowl or counter when mixed or kneaded. The dough should be soft but elastic, cleaning the bowl or kneading surface. Target dough temperature after kneading (78°-82° F.), so it will not raise too rapidly, UNLESS you are using a fast-rising yeast method.
- **Use proper fermentation temperature** (78-80° F.) to prevent the dough from over-gassing or getting tacky and help develop the gluten strands further – making the dough easier to shape.
- **Divide dough evenly** (weigh the dough, divide by number of pieces needed) and round dough to rest. This helps make balanced braids, and equal-sized rolls and loaves.
- **Allow yeast dough to rest** – about 10-15 minutes of bench time after deflating dough, dividing, and rounding. This will make the dough pieces will be more extensible – not inclined to rebound when rolled.
- **Keep the dough pieces covered during bench rest and while shaping to prevent crusting.**
- **Do not over-flour or over-grease the shaping surface.** This leaves a coating of flour or grease on the dough surface and the result will not be as nice in appearance or flavor.
- **Proof bread until ¾ or nearly fully proofed** before egg washing and slashing surface of loaf.
- **Preheat oven 5-10 minutes** before egg washing or slashing.



Source: A Baker's Dozen
Labs manual, Lab 12,
HomeBaking.org

Refrigerator Potato Dough

Dough Preparation Time: 30 minutes Fermentation Time: 1 hour

Baking Time: 10 to 12 minutes

Yields: 3 lb., 12 oz. dough, 3 dozen rolls (1 ¾ oz./48g); OR, 3 dough pieces (1 ¼ lb/565g)

Ingredients	Measurement	Weight	Bakers %
Unbleached all-purpose flour*	6½ to 7 cups	27.5 to 30 oz 780g to 850g	100%
Warm water (95 °F.)	½ cup	4 oz	13%
Active dry yeast**	4½ tsp (2 pkg.)	0.5 oz/14g	1.5%
Sugar	½ tsp	2 g	0.2%
Milk, scalded, cooled (80° F.)	1½ cups	12 oz	40%
Butter	½ cup + 2 T.	5 oz/142g	16%
Sugar	½ cup	3.5 oz/100g	12%
Salt	2½ tsp	0.6 oz/15g	1.75%
Mashed potato, unseasoned***	1/3 cup	3 oz/85g	10%
Whole eggs	2 large or 3 medium	3.5 oz/100g	12%
Citrus zest, optional	1½ tsp	3g	0.4%

* For whole grain option, replace 4 cups (16 oz.) all-purpose flour with whole wheat flour

** Fast-rising or instant yeast may be used. Combine yeast with flour; combine water and milk (72° F); add together

*** 1 small potato, white, yellow or sweet; cooked, peeled and mashed, or equivalent potato flakes or flour

DIRECTIONS

1. Mix warm water, yeast and ½ tsp. sugar in small bowl. Set aside 5 minutes.
2. Heat milk in microwave until steaming hot (190° F.). Pour milk into large mixing bowl; add butter, ½ cup sugar, and salt; mix. Cool to 80° F. or cooler.
4. When milk mixture is cooled, stir in dissolved yeast, mashed potato and eggs. Gradually add 4 cups flour (if using whole wheat flour, add it first). Beat at medium speed 3-5 minutes until smooth. Cover bowl and let dough rest 15 minutes.
4. Mix in remaining flour until dough forms a rough ball.
5. Place dough on lightly floured surface; knead about 10 minutes until smooth and elastic OR mix with dough attachment on medium speed until dough cleans the bowl, about 7-10 minutes. If dough is too dry, mix/knead in 1-2 T. water. Target dough temperature: 78° F. or cooler.
6. Place dough into large greased bowl; turn dough; greased-side up. Cover bowl with sealing lid or put dough in a very large (2-gallon) plastic food storage bag sprayed with non-stick spray. Force air out and seal bag leaving room for dough to raise.
7. Refrigerate dough, deflating dough after about an hour; round dough into a ball, smooth side up. Refrigerate until ready for shaping; dough will keep in refrigerator one to three days; deflate dough again if needed.
8. Divide dough into thirds (1 to 1 ¼ lb. each) and shape each into a smooth ball. Cover to rest 5-10 minutes.
9. Sculpt each 1 to 1 ¼ lb. piece into a dozen rolls, a loaf or braid, snail or buns using *Dough Shaping 101* guide.
10. Follow oven preheating and baking instructions for each product.

Bake Loaves at 350° F. for 25-30 minutes

Bake Rolls at 375° F. for 12-15 minutes
(190-210° F. at center)



Nutrition Facts

Serving Size (48g)	
Servings Per Container	
Amount Per Serving	
Calories 120	Calories from Fat 30
	% Daily Value*
Total Fat 3.5g	5%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol 20mg	7%
Sodium 190mg	8%
Total Carbohydrate 20g	7%
Dietary Fiber 0g	0%
Sugars 4g	
Protein 3g	
Vitamin A 2%	Vitamin C 0%
Calcium 2%	Iron 6%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300 mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

Dough Options:

90-Minute Bread Dough, HomeBaking.org/recipes/90_minute_yeastdough.php

Bread in a Bag, HomeBaking.org/PDF/breadinabag.pdf

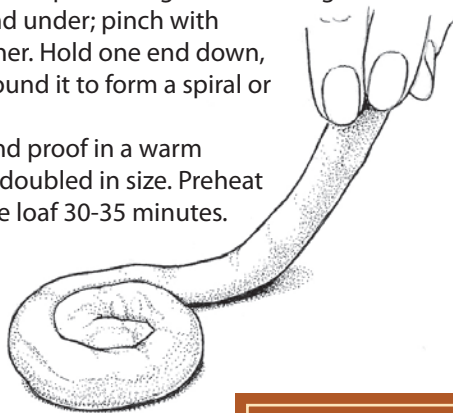
Loaves and Braids

For these shapes, use a one to 1¼ lb/565g piece of the Refrigerator Potato Dough or a favorite sweet yeast dough recipe.

Snail – Traditional Pao Doce shape

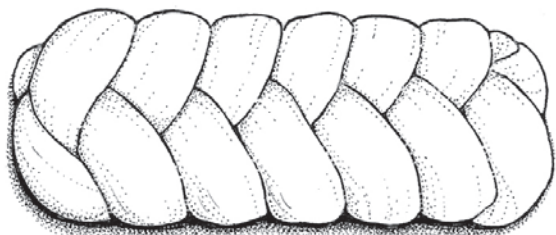
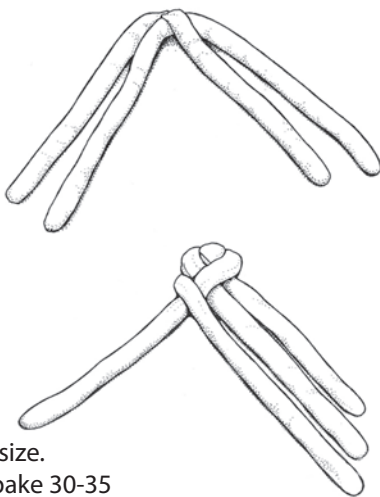
1. Grease one, 9 x 1½-inch round baking pan per 1 to 1¼ lb. dough piece.
2. Roll one dough piece into a 25 x 1½-inch dough rope. Starting in center of pan, twist the rope of dough while coiling it into a snail shape. Tuck the end under; pinch with fingertips to seal together. Hold one end down, then wind the other around it to form a spiral or snail shape.
3. Cover shaped dough and proof in a warm (95°-105° F.) place until doubled in size. Preheat oven to 350° F. and bake loaf 30-35 minutes.

Options: Tuck currants or snipped raisins into the snail while shaping.



Four-Strand Braid

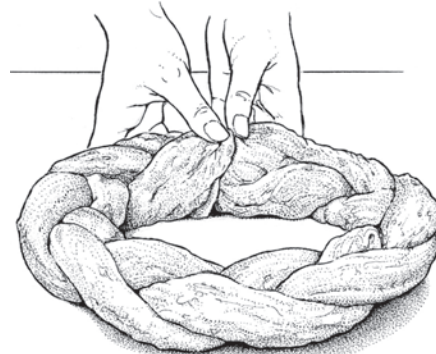
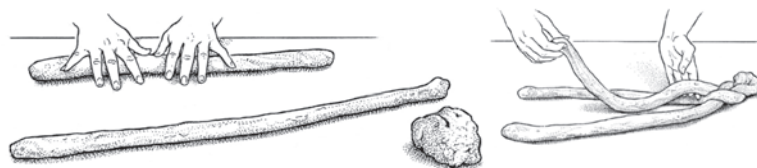
1. Divide 1¼ lb/565g piece of dough into four equal (4-5 oz.) ropes, each 14 inches long.
2. Pinch the four ropes of dough together at one end and lay out as shown.
3. Take the left outside rope and lay it at the inside of the right two strands. Next take the right outside rope and move it to the inside left. Repeat the process, moving the outside piece of dough to the inside of the opposite side, until all the dough has been used. Pinch ends together to seal.
4. Place on a greased or lined baking sheet pan. Cover lightly with sprayed plastic wrap. Proof until doubled in size. Preheat oven to 350° F. and bake 30-35 minutes until golden and 210° F. at center.



Snail, Four-Strand Braid and Wreath illustration source: The King Arthur Flour Baker's Companion, The Countryman Press, 2003, kingarthurfLOUR.com
How-to-shape these breads is found on Dough Sculpting 101 DVD

Wreath

1. Pinch three 7 oz., 25-inch ropes of dough together at one end, and lay out as shown.
2. Take the left outside rope and lay it at the inside of the right two strands. Next take the right outside rope and move it to the inside left. Repeat the process, moving the outside piece of dough to the inside of the opposite side, until all dough is braided.
3. Pinch ends together to seal. Cover and proof; bake at 350° F., 25-30 minutes.



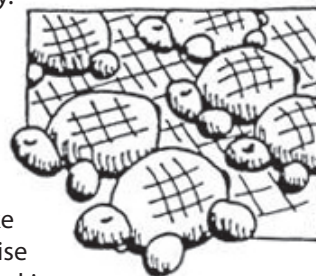
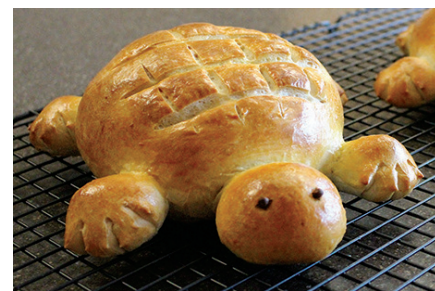
EGG WASH

Just before baking, whisk 1 egg + 1 Tablespoon cold water and brush over surface for a shiny coat.

Critters

Turtles

1. For each turtle: form a large egg-sized piece of dough into a smooth ball.
2. Place on a lightly greased baking sheet and flatten slightly with hand.
3. Add a small piece of dough for head, four smaller pieces for legs, and an even smaller piece for a tail. Tuck the pieces slightly under the edge of the body.
4. Pinch end of tail and legs to form a point. Press well to seal into position on body.
5. With kitchen scissors, clip into head dough piece to form eyes and mouth. Insert raisins for eyes.
6. With a serrated or sharp knife, make shallow cuts lengthwise and crosswise across "shell" to form the turtle's markings.
7. Cover and let proof until double. Preheat oven to 400° F. Brush with egg wash if desired. Bake for 15-18 minutes or until golden. The turtle should sound hollow when tapped.



Critters illustration source and how-to videos for turtles and alligators, Fleischmann's Yeast, breadworld.com/education/Recipe-Videos

Local Connections

Double the learning ... Book and Bake

Enjoy a book while dough rests, rises or bakes

Four-time national award winning *Baking with Friends* (74-page hardback book) provides teachers, parents and youth leaders recipes, age-appropriate baking activities, fun facts, vocabulary words, skills check-list, baking certificate, and many other resources. A related children's book is suggested for each recipe!

A few great choices for this lab include:

Preschool-Kindergarten:

Bread, Bread, Bread, Ann Morris and Ken Heyman

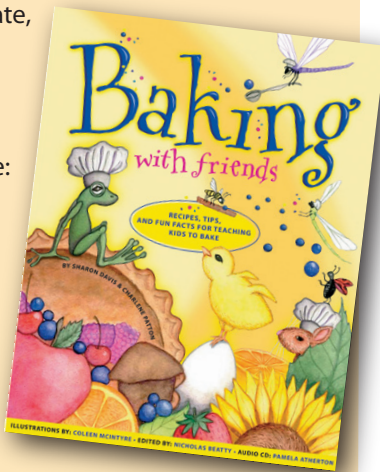
Early Elementary:

Walter the Baker, Eric Carle

Elementary:

Everybody Bakes Bread, Norah Dooley

More ideas: HomeBaking.org/foreducators/index



DVD Table of Topics:

Intro

Tools of the Trade

Refrigerator Potato Dough

Time-Saving Techniques

Tips for Shaping Success

Dough Shapes

- Butterhorn/Crescent/Flip'em
- Clover Leaf & Dinner Rolls
- Single & Double Knot Rolls
- Rosette
- Twisted Breadsticks

Loaves and Braids

- Cheese-Filled Sweet Lattice
- Four-Strand Braid
- Pan and Round Loaves
- Snail
- Wreath

Soft Pretzels

Sculpting

- Alligator & Turtle
- Grand Old Flag Bread
- Tom Turkey
- Wheat Sheaf



Cookies

- Huge
- Scary
- Spiders
- Teddy Bears

Play Clay Dough

Bread in a Bag

Father Dominic Shaping Videos

- Bambino
- Braided Loaf
- Bread Doneness
- Washes

Resources included on DVD:

- A Baker's Dozen Labs/Lab 12
- Bread in a Bag Recipe
- Bread Shaping for Fun Directions
- Grand Old Flag Bread Directions
- Tom Turkey Sculpting Directions

Play Clay video: argostarch.com/Recipe/Play_Clay

To order DVD: HomeBaking.org/products.php#vUdhs0vLDwl

Shape Up! Your Food Enjoyment

Too often, food is just something to unwrap and stuff down on the run. Adding hands-on food preparation reduces several factors contributing to overweight.

- Preparing food is a great way to get more active. ("Burn and earn" the food you consume!)
- Sharing food often increases enjoyment, improves choices and eating more appropriate amounts.
- Creating aroma, flavor, and eye-appealing food develops satisfaction, self-esteem, self-confidence and relationships that reduce the need to over-consume.

Shape Up! Service Activity

Polish your skills and share your wealth!!

Select a local group to conduct a "Shape Up" activity

Remember to check to see if the location has a kitchen or will bake-off the shapes. If not, place shapes on aluminum pan and cover with plastic bag and send home to bake.

Plan a couple hours to:

- "dough sculpt" as a creative hands-on food skill-building opportunity for younger children to learn more about bread and grains
- assist parents as "first teachers" to enjoy reading a book, the recipe, shaping and baking with their children
- spend a couple hours with older adults as "dough therapy," talking while shaping rolls to share at a meal or afternoon coffee or tea break
- "build bonds" between peers or across ages

Getting Started:

Read *Tips for Shaping Success* on Page 2

1. Prepare portable "Shape Up Baking Kit" – a washable plastic tub with surface and hand-cleaning items, baking pans (as needed), parchment, pan spray, plastic wrap, dough scraper/divider, food thermometer and aprons (disposable aprons are sold on-line for pennies), HomeBaking.org/PDF/portable_kitchen.pdf
2. Pre-prepare several batches of Refrigerator Potato Dough in the class lab for the group to divide and sculpt. Before you go to the event, be sure the dough is punched, rounded and refrigerated. The dough will be rested and ready when you arrive!
3. If time allows, each person or team can prepare *Bread in a Bag*. View Fleischmann's Yeast recipe and instructional video included on DVD or on-line at breadworld.com/education/Recipe-Videos
4. Work together and prepare the dough on-site by hand, in a bread machine, mixer or food processor, redstaryeast.com/yeast-baking-lessons/how-bake-videos/ OR techniques, breadworld.com/education/Technique-Video
5. Bake on site or take home.



Prepared/tested by Sharon Davis, Family & Consumer Sciences Education and Charlene Patton, Family & Consumer Sciences, HomeBaking.org