

# DOUGH SCULPTING 101

*lab twelve*





# DOUGH SCULPTING

## Lab 12

**Artisan: a craftsman; skilled worker who practices some trade or handicraft**

**Introduction:** The baking art of “dough sculpting” is in your grasp now that you’ve worked through the labs! Sculpting or shaping is the reward of well-prepared dough.

Sculpted breads and rolls are at the heartbeat of many cultures worldwide. These bread traditions are carried to the U.S. wherever immigrant groups settle and their celebrations and everyday life call for breads such as:



Photo courtesy of [www.wheatfoods.org](http://www.wheatfoods.org)

Houska (HOHS-kuh) or vanoka Czechoslovakia  
 Challah (HAHL-lah) Jewish  
 Tsoureke (soar-EH-key) Greek  
 Maneesh (mah-na-Eesh) Lebanese  
 Pao duce (powdoo-chay) Portuguese  
 Limpa brot (LIM-puh broht) Sweden  
 Fougasse (foo-GAH-suh) Provence, France  
 Kugelhopf (KOO-gul-hohpf) Germany  
 Kuhlich (KOO-lik) Russian  
 Brioche (bree-OHSH) France  
 Epi (Ay-pee) France  
 pan Blanco (pahn BLAHNK-oh) Mexico  
 Focaccia (foh-CAH-chee-uh) Italy  
 Zweibach (ZVEYE- bahk) Mennonite tradition

**Ask** your students to tell about a shaped bread or cookie that is important to their family’s life. Some may be listed above—others may include the everyday shaped flatbreads like tortilla, naan, chapati, injera, lavash or cookies like kringla and other holiday or celebration cookies.

- Check out Mary Gubser’s 65,000 mile trek across all 50 states in *America’s Bread Book*. She illustrates shaping and locates many of these breads being baked in the USA!
- View National Festival of Breads creations at [www.nationalbreadsfestival.com](http://www.nationalbreadsfestival.com)
- See artisans at work at [www.kingauthorflour.com](http://www.kingauthorflour.com)

## Terms and Techniques to Know

**Baker Terms:** Look these terms up in the Glossary and know their meaning.

Artisan  
 Bench time  
 Butterhorn or crescent  
 Braid  
 Cloverleaf  
 Divide  
 Egg wash  
 Portion  
 Ripe test  
 Roll  
 Score  
 Slash  
 Snail  
 Twist



Grand Old Glory Bread  
 Recipe: [www.wheatfoods.org](http://www.wheatfoods.org)

Top Photo: Fougasse Flatbread Courtesy of [www.breadworld.com](http://www.breadworld.com)

## Outcomes:

1. Name bread or cookie shapes they have enjoyed, seen or purchased.
2. Demonstrate ingredient knowledge, measurement, preparation method and scaling skills gained in previous labs.
3. Correlate the value of dough-sculpting skills to the value it adds to products produced by a local artisan baker, chef or caterer.
4. Practice dough-handling skills to divide and shape value-added products such as rolls, twists, braids, specialty cookies or other creative shapes.
5. Create a specialty shape or structure for enhancing a table, for sale or consumption.
6. Compare the impact and value of a dough sculpture with other centerpieces such as flower arrangements or ice sculptures.
7. Select a local group to conduct a "Shape Up," activity offering dough-sculpting as a creative skill-building opportunity for younger children, parents as "first teachers," older adults or peers.



## For Teacher:

- Beginning students may benefit from the *Take 10 Skill Drill Corn Starch Clay Dough*. Prepare corn starch sculpting dough ahead as needed.
- **Preview** on-line videos and step-by-step illustrations and instructions for yeast bread mixing, kneading, shaping at [www.bettycrocker.com](http://www.bettycrocker.com); [www.breadworld.com](http://www.breadworld.com); [www.hodgsonmill.com](http://www.hodgsonmill.com); [www.kingarthurflour.com](http://www.kingarthurflour.com), Life Skills Education; and [www.redstaryeast.com](http://www.redstaryeast.com), [www.solofoods.com](http://www.solofoods.com).
- Baking tips, techniques, blogs and more may be viewed at [www.bettycrocker.com](http://www.bettycrocker.com), [www.clabbergirl.com](http://www.clabbergirl.com), [www.landolakes.com](http://www.landolakes.com); [www.marthawhite.com](http://www.marthawhite.com) and [www.argostarch.com](http://www.argostarch.com), [www.chsugar.com](http://www.chsugar.com), [www.dominosugar.com](http://www.dominosugar.com).
- Demonstrate several shaping methods or arrange for a demonstration by a local baker, 4-H foods leader, culinary baking student, or home baker.
- **Apply Technology:**
  1. Prepare dough in a bread machine, food processor or with stand mixer, then shape.
  2. Use the appliance manual to know how much flour each respective machine can handle!
  3. Great bread machine and mixer baking guidelines and visuals may be found at [www.bettycrocker.com](http://www.bettycrocker.com), Tips and Techniques; [www.breadworld.com](http://www.breadworld.com); [www.kswheat.com](http://www.kswheat.com); [www.kingarthurflour.com](http://www.kingarthurflour.com); [www.redstaryeast.com](http://www.redstaryeast.com)
  4. The Home Baking Association offers lesson plans to accompany bread machine technology in ***The Bread Machine Activity Guide***. [www.homebaking.org](http://www.homebaking.org)

- Assign students to practice Skill Drills for portioning, weighing, rolling, shaping dough evenly using the Corn Starch Clay Dough.
- Copy and study the shaping diagrams. Practice a few of the shapes—knot, crescent, cloverleaf, braid, huge hairy spider, teddy bears...
- Read the recipe for the dough your lab will prepare.

## Need-More-Time Lab Options:

- **Refrigerate yeast dough several hours or up to two days.**
  1. Prepare dough using cool liquids (72° F).
  2. Spray or oil LARGE plastic food bags or sealable bowls (3 times the size of the dough).
  3. Place smooth ball of dough in prepared bag or bowl; squeeze out air and close bag at the very top.
  4. Punch or work dough down after 30 to 60 minutes in the refrigerator—to sealed bags or bowls.
- **Freeze yeast dough for later! TIPS: Use 1 ½ times the yeast.**
  1. Freeze dough after the dough is kneaded but before it can rise even once. Divide dough into ~1-lb. pieces. Flatten into disks, 1-inch thick.
  2. Wrap disks in plastic wrap or foil. Place in self-sealing plastic food bags.
  3. Place on cookie sheet and freeze one hour to harden. Keep frozen up to 4 weeks.
  4. Thaw in refrigerator overnight. Partially unwrap and place on counter to bring dough to room temperature (15-20 minutes).
  5. Punch dough, divide, rest, shape and bake as directed.

Refrigerator and Frozen Dough Guidelines, [www.redstaryeast.com](http://www.redstaryeast.com).

- **Cookie dough freezes well for 4 to 6 weeks.**
  1. After mixing, shape dough into one or two logs or discs and seal dough tightly in plastic wrap; chill dough in the refrigerator and then freeze in a freezer bags or container.
  2. Thaw dough in refrigerator and proceed as recipe directs.

Cookie dough freezing guidelines, [www.landolakes.com](http://www.landolakes.com)

## Take 10 Skill Drill

Each lab group will need an electronic scale, prepared Corn Starch Dough, a rolling pin or eight-inch long, 1-inch thick dowel rod, dough divider or cutting tool that will not scar the counter. (p. 136) See plastic dough scraper and level tool available at [www.homebaking.org](http://www.homebaking.org)

1. Practice weighing, portioning, sculpting/shaping with corn starch dough.
2. Choose three or more shapes to practice from the diagrams in this lab.
3. Create a bread basket for serving rolls out of Corn Starch Dough. (Step 6).

## Computer Lab:

- Visit [www.homebaking.org](http://www.homebaking.org) Member Links
- View bread shapes at [www.foodsubs.com/Bread.html](http://www.foodsubs.com/Bread.html)
- Learn about the Bread Bakers Guild of America and their artisan bread team. [www.bbga.org](http://www.bbga.org)
- View How to Knead and Braiding Bread Videos, [www.breadworld.com](http://www.breadworld.com)
- View National Festival of Breads winning bread shaping, Sweet Potato Focaccia and Pane Bianco, [www.nationalfestivalofbreads.com](http://www.nationalfestivalofbreads.com)

## Corn Starch Clay Dough

Yield: About 2 pounds    Preparation Time: 20 minutes

### Ingredients

- 1 cup (4.5 oz/128g) corn starch
- 2 cups (1 pound) baking soda
- 1 1/4 cups (12 oz) cold water
- 1 tablespoon vegetable oil
- 1 tablespoon liquid food color, or 1 to 2 teaspoons fabric dye\*
- 1 to 2 teaspoons paste food color

\*Such as Rit®

### Directions

1. In medium saucepan, stir corn starch and baking soda. Add water and oil all at once and stir until smooth. Add color if desired, while stirring.
2. Stirring constantly, cook over medium heat *until mixture reaches the consistency of SLIGHTLY dry mashed potatoes*. (Mixture will come to a boil, then start to thicken, first in lumps and then in a thick mass; it should hold its shape.) If dough is overcooked, shapes may crack.
3. Turn out onto plate and cover with damp cloth; cool.
4. When cool enough to handle, turn the dough onto work surface dusted with corn starch; knead until smooth and pliable. If not to be used immediately, store completely cooled dough in tightly closed plastic bag or container.
5. Divide and shape dough as desired by molding into shapes, balls or ropes with hands. Or roll flat with a rolling pin or press with hands, making pieces of moderate thickness. (Items less than 1/4-inch thick tend to be fragile; very thick pieces often dry unevenly and may crack.)
6. **Coiled or Braided Basket:** Color dough if desired, when mixing. Cover a large inverted mixing bowl tightly with aluminum foil. Turn up the edge of the foil to make a shelf. Cut a circle of 1/2-inch thick dough. Place this circle on top of the inverted bowl, forming the base. Shape long, very thin snakes of dough and one braid using three strands, or twist two strands. Starting at the base circle, place the braids or twists around the bowl, firmly pressing each new row of into the row before it, dampening with water to stick together. Stop when you reach the foil shelf. Use one long braid or two strands twisted and lay around the top edge to finish.

### Finishes:

**Natural:** Air dry overnight, on wire racks, if possible for best air flow, turning several times. Spray or brush on clear acrylic to seal.

**Baked:** Preheat oven to 350° F., then turn oven off. Place on a pan in the oven and leave until the oven is cold; turn item several times to help dry evenly. Repeat the process one or more times if needed. Be sure to remove the pan with item on it before reheating the oven.

**Painted:** After drying, apply acrylic white paint followed with coat of color of choice.

### Storage:

Store unshaped dough in an airtight container or heavy plastic bag in a cool place up to 2 weeks. Knead stored dough until smooth before using.

**MICROWAVE METHOD:** Stir corn starch and baking soda in 2 1/2-quart microwavable bowl. Add water and oil all at once and stir until smooth. Microwave at High (100%) uncovered, 2 minutes; stir. Microwave 3 to 4 minutes longer, stirring after each minute until mixture reaches consistency of SLIGHTLY dry mashed potatoes. Complete as above.

Corn Starch Clay Dough recipe courtesy of ACH Foods, [www.argostarch.com](http://www.argostarch.com)



Photo courtesy of [www.wheatfoods.org](http://www.wheatfoods.org)

## Baking Science:

# Why add cooked, unseasoned mashed potatoes or squash?

For hundreds of years, bakers have known adding cooked, mashed potato or squash keeps bread moister, fresher and tender. But how much did they use? Today's bakers have it down to a science.

**Apply Bakers Percent skills!** Pick an ordinary bread recipe. Calculate how to add cooked and mashed potato or sweet potato or carrots by using this guide:

**Option 1:** Use cooked, unseasoned mashed potato.

Amount: Use up to 10% of the flour weight as mashed potato—reduce the liquid—deduct 80% of the potato weight from the water in the formula.

(Ex: If adding 1.5 oz/45g mashed potato to a dough, deduct 1.25 oz of the total water)

**Option 2:** Substitute cooked and mashed sweet potato, squash, or carrots for potatoes.

Amount: Use up to 10% of the flour weight (Ex: For 1 lb/450g flour use 1.5 oz/45g mashed sweet potato, squash or carrots)

**Option 3:** Bakers may also substitute potato flour or flakes for mashed potato.

Amount: Use up to 5-10% of flour weight. Disperse the potato flour or flakes into the flour before adding liquid. Increase amount of water by 75% of the weight of potato called for in recipe. (Ex: For 1 lb/450g flour use 1.5 oz/45g potato flour plus 1 oz/30g additional water.)

**Great sources of potato flour:** [www.bobsredmill.com](http://www.bobsredmill.com) or [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)

**Fun Fact:** Potatoes, pumpkin, sweet potato, and squash are all early American “fast foods”—easy to pack or store raw and quick to prepare. Since these vegetables are mostly water (75-80%), once they are heated (in a hearth, camp fire, oven or pan on the stove) to over the boiling point (212° F.), they cook quickly with the water they contain and become soft and easy to mash.

### Lab Supply List:

- Ingredients for each lab—each recipe makes three, one to 1.25 lb dough pieces, enough for three different shaping options
- Additional butter, sugar, egg wash as needed for shaping/baking options
- Electronic scales
- Rolling pin
- Dough scraper or dough divider tool that will not cut the counter. (See [www.homebaking.org](http://www.homebaking.org) order form for plastic dough tool.)
- Bowl, plastic bag or wrap, damp non-terry (linen or cotton) towel or parchment sheets to cover resting dough or while shaping dough pieces
- 18 X 13 X 1-inch half sheet pans, cookie sheet pans, large pizza pans or baking stones
- Parchment paper pan liners or pan spray
- Ruler



**Baker notes:** Although potato may be omitted, including it will produce a roll that stays moist longer and has a more tender crumb.

**For dough being sculpted for decorations, there is no need to add potato! Simply omit it and add water or milk for 80% of the potato weight being omitted.**

Egg wash the sculptures before baking for a sheen, OR bake and shellac for permanent art.

## Baking Lab: The Science and Art of Dough Sculpting



**Teacher Note:** The recipe is for a two-day lab.

For a one-day lab, a fast-rising yeast method may be used and simply:

1. Prepare dough. Cover.
2. Allow dough to ferment (rise), until doubled in size in 80° F. draft-free place. (Use Ripe Test, Glossary)
3. Punch, divide, round dough pieces, bench rest dough 10-15 minutes (covered); proceed with Step 9.

# Refrigerator Potato Dough

Dough Preparation Time: 30 minutes    Baking Time: 10 to 12 minutes

Yields: 3 dozen (1.75 oz./48g) rolls; three 1.25 lb/565g dough pieces

Ingredients	Measurement	Weight	Bakers %
Unbleached all-purpose flour**	6 ½ to 7 cups	27.5 to 30 oz 780g to 850g	100%
Warm water (95 °F.)	½ cup	4 oz	13%
Active dry yeast	4 ½ teaspoons (2 pkg.)	0.5 oz/14g	1.5%
Sugar	½ teaspoon	2 g	0.2%
Milk, scalded, cooled (80° F.)	1 ½ cups	12 oz	40%
Butter	½ cup + 2 T.	5 oz/142g	16%
Sugar	½ cup	3.5 oz/100g	12%
Salt	2 ½ teaspoons	0.6 oz/15g	1.75%
Mashed potato, unsalted*	1/3 cup	3 oz/85g	10%
Whole eggs	2 large or 3 medium	3.5 oz/100g	12%
Citrus zest, optional	1 ½ teaspoons	3g	0.4%

\*1 medium small potato cooked and mashed or equivalent potato flakes or flour

\*\*may be part whole wheat or Ultragrain® all-purpose flour

## Directions

- Combine warm water and yeast with 1/8 teaspoon sugar in small bowl. Stir and set aside 5 minutes.
- 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 95° F. or cooler.
- 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 to 5 minutes until smooth. Cover bowl and let dough rest 15 minutes.
- Mix in enough remaining flour until dough forms a rough ball and pulls away from sides of the bowl.
- Place dough on lightly floured surface; knead about 10 minutes until smooth and elastic OR mix with dough attachments on medium speed until dough cleans the bowl, about 7 minutes. Dough temperature: 78° F. or cooler.
- Place dough into large greased bowl; turn dough; greased-side is up. Cover bowl with sealing lid or put dough in a very large (2 gallon) plastic food storage bag sprayed with vegetable spray. Force out air and seal at top of bag leaving room for dough to raise. (If freezing, divide into three equal discs, wrap as directed above and freeze.)
- Refrigerate dough, punching it down 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; punch down if needed.
- Preheat oven, 400° F. Divide dough into thirds and shape each into a smooth ball. Give dough 5-10 minutes bench time, covered.
- Sculpt each piece into... a dozen rolls, a braid, snail or buns using Shaping 101 guide.

Source: *Baking with Friends*, [www.homebaking.org](http://www.homebaking.org)

Nutrition Facts	
Serving Size (48g)	
Servings Per Container	
Amount Per Serving	
<b>Calories 120</b>	<b>Calories from Fat 30</b>
% Daily Value*	
<b>Total Fat 3.5g</b>	<b>5%</b>
Saturated Fat 2g	<b>10%</b>
Trans Fat 0g	
<b>Cholesterol 20mg</b>	<b>7%</b>
<b>Sodium 190mg</b>	<b>8%</b>
<b>Total Carbohydrate 20g</b>	<b>7%</b>
Dietary Fiber 0g	<b>0%</b>
Sugars 4g	
<b>Protein 3g</b>	
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	

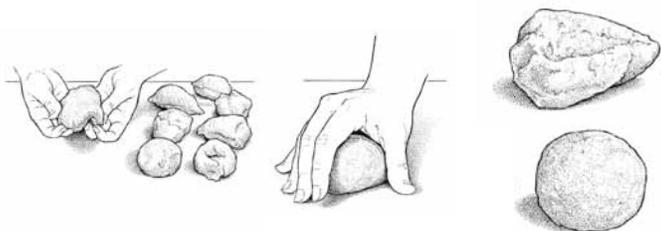
## Tips for Shaping Success

**Yeast dough** for the shaping artist will:

- have a silky texture, be properly developed—elastic and moist but not “tacky” or too sticky
- be fermented, punched and rested in refrigerator or at room temperature (68° to 72° F.)
- be relaxed, extensible (can be rolled out or extended without springing back)

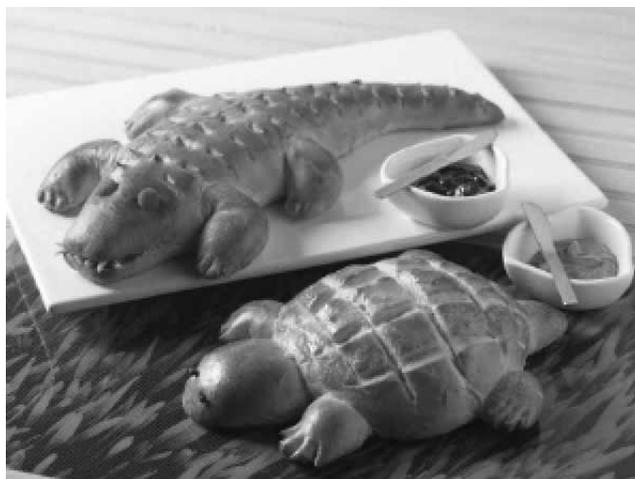
**To achieve this dough:**

- **Develop the gluten** so 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. Dough temperature after kneading—78 and 82° F.—so it will not raise too rapidly, UNLESS you are using a rapid rise technique.
- **Proper fermentation** (first rising) temperature (78-80° F.) will prevent the dough from over-gassing or getting tacky and help develop the gluten strands further—making the dough easier to shape. (Also see refrigerating dough guidelines.)
- **Divide dough evenly** (weigh the dough, divide by number of pieces needed in the shape(s). This helps make balanced braids, rolls and loaves.
- **Allow yeast dough to rest**—have bench time (~5-10 minutes) after punching, dividing, rounding. This will make the dough much easier to shape. The dough pieces will be more extensible—not inclined to just rebound back when rolled.
- **Keep the dough pieces covered during bench rest (~10-15 minutes) 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. (See Ripe Test, Glossary).
- **Preheat oven 5 to 10 minutes** before egg washing or slashing.



## Dough Sculpting 101

- **Read Tips for Shaping Success** (text box at side).
- **Wash hands and surfaces well.** Prepare sculpting dough.
- **Study and select up to three options** to prepare with each third of the Refrigerator Potato Dough.
- **Shaping Rolls:** Divide Refrigerator Potato Dough recipe evenly into three, 1 to 1 ¼ lb/565g pieces or use a favorite dough to prepare a dozen roll shapes for each dough piece.
- **Everyone wants their own edible art...**Tuck a small piece of paper with baker's initials under the edge of the 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 or clean dampened non-terry towel. Place in warm (95-105° F.), draft-free place to rise until double, about 45 minutes. (Use Ripe Test in glossary). Bake rolls at 400° F. oven, 12 to 15 minutes. Remove from pan to cooling rack.



Alligators and Turtles at [www.breadworld.com](http://www.breadworld.com)

## Rolls and Critters

**Dinner Rolls:**

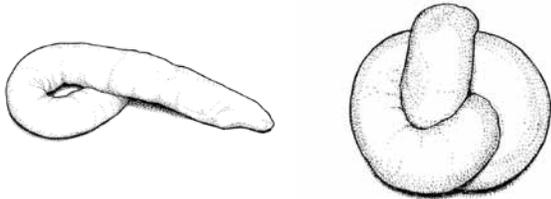
1. Shape one third (one to 1 ¼ lb/565g) Potato Dough into a log about 3 inches thick. Use a dough cutter to cut log into 12 even (~3 oz/85g) pieces. Weigh a few to check your eye.
2. To shape: Flatten dough piece into a disc on a lightly floured surface; bring edges to center and pinch; turn dough over and place pinched edge down on greased baking pan.
3. Cover, proof and bake as directed above.

*Illustration Source: King Arthur Flour Whole Grain Baking, The Countryman Press, 2006. [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)*

## Single Knot Rolls

1. Cut a one to 1 ¼ 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 as directed above.

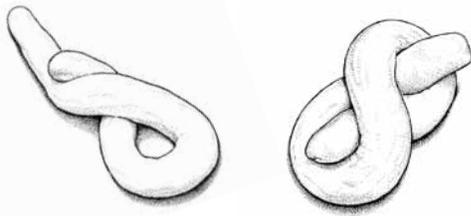
Illustration Source: *The King Arthur Flour Baker's Companion*, The Countryman Press, 2003. [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)



## Double Knot

1. Cut a one to 1 ¼ 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 as directed above.

Illustration Source: *The King Arthur Flour Baker's Companion*, The Countryman Press, 2003. [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)



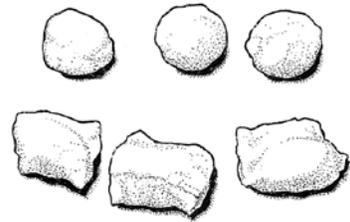
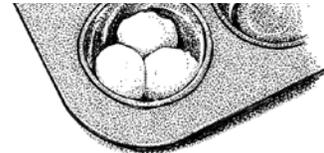
## Rosette

1. Roll a one to 1 ¼ lb/565g dough into a 6 X 12-inch rectangle ½-inch thick. Starting from the 6-inch side, cut into 1-inch wide strips.
2. Roll each strip into a 14-inch rope.
3. Tie in a loose knot, leaving two long ends. Tuck one end under the roll and pinch to seal. Bring the other end up and over the roll and pinch to seal on the underneath side. Leave a small opening in the center of the rosette.
4. Place on a greased or lined baking sheet pan about 2 inches apart. Cover and let proof (rise) until double.
5. Preheat oven to 375° F. and bake 12-14 minutes.

## Cloverleaf Rolls

1. Shape one to 1 ¼ lb/565g of dough into a log about 3 inches thick. Use a dough cutter to cut log into 12 even (~3 oz/85g) pieces. Weigh a few to check your eye.
2. Divide each of the 12 pieces into three small pieces and roll these into smooth balls.
3. Place the three balls together in greased medium-sized muffin cups. Repeat for 1 dozen. Proof and bake as directed above.

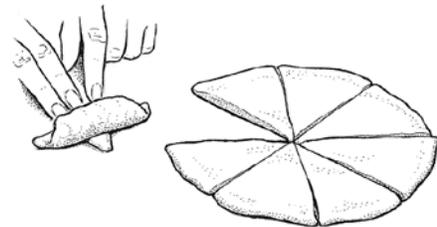
Illustration Source: *The King Arthur Flour Baker's Companion*, The Countryman Press, 2003. [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)



## Butterhorn or Crescent Rolls:

1. Roll 1/3 of the dough (1.25 lb/565g) into a large (16-inch) circle, about 1/4-inch thick.
2. Spread thinly with softened butter; cut like a pie into 12 even wedges; roll each wedge up, wide edge to point; place rolls a couple inches apart on greased baking sheet with point underneath. Cover and let rise until double in size. Bake as for Dinner Rolls.

Illustration Source: *The King Arthur Flour Baker's Companion*, The Countryman Press, 2003. [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)



## Tortoise

For each tortoise: form a large egg-sized piece of dough into a smooth ball.

1. Place on a lightly greased baking sheet and flatten slightly with hand.
2. 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.
3. Pinch end of tail and legs to form a point. Press well to seal into position on body.
4. With kitchen scissors, clip into head dough piece to form eyes and mouth.
5. With a serrated or sharp knife, make shallow cuts lengthwise and crosswise across "shell" to form the tortoise's markings.
6. Cover and let proof (rise) until double. Preheat oven to 400° F. Brush with egg wash if desired. Bake for 15 to 18 minutes or until golden. Tortoises should sound hollow when tapped.

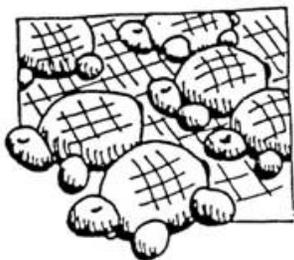


Illustration and directions courtesy of [www.kansaswheat.com](http://www.kansaswheat.com)

## Loaves and Braids

For these shapes, use a one to 1 ¼ 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 1 ½ -inch round baking pan per 1 to 1 ¼ lb. dough piece.
2. Roll one dough piece into a 25 X 1 ½ -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° to 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. Prepare an egg wash and brush over surface just before baking.

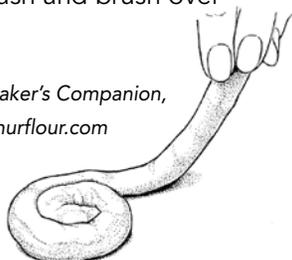


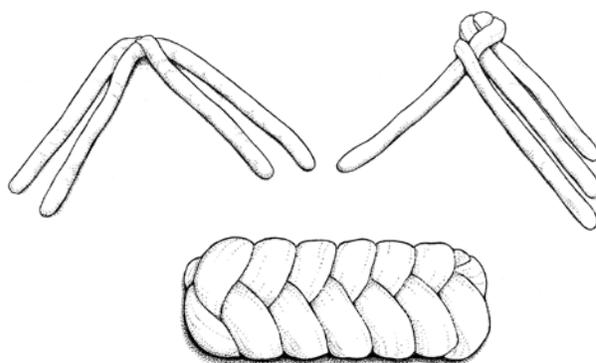
Illustration Source: *The King Arthur Flour Baker's Companion*, The Countryman Press, 2003. [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)

## Four-Strand Braid

1. Divide 1 ¼ lb/565g piece of dough into four equal ropes, 14 inches long each.
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—use Ripe Test in glossary. Preheat oven to 350° F. and bake 30-35 minutes, until golden and 210° F. at center.

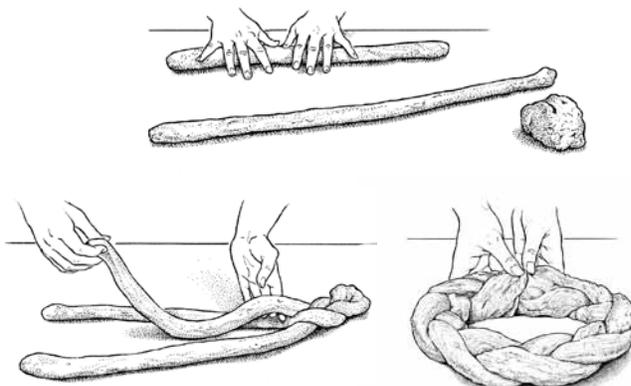
**Option:** Egg glaze surface just before baking.

Illustration Source: *The King Arthur Flour Baker's Companion*, The Countryman Press, 2003. [www.kingarthurfLOUR.com](http://www.kingarthurfLOUR.com)



## Wreath

1. Pinch the three 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 the dough has been used. 3. Pinch the ends together to seal.



# Cheese-Filled Sweet Lattice Braid

Yield: 2 braids; 28 (1.5 oz/40g) slices

## Ingredients

### Dough

- 1, (¼ oz/7g) envelope (2 ¼ teaspoons) fast-rising, highly active yeast
- ¼ cup warm (120-130° F)\* water
- ½ cup warm (120-130° F)\* milk
- ¼ cup (½ stick) butter
- 1 ¼ teaspoons salt
- ¼ cup sugar
- 1 teaspoon vanilla
- 1 large egg, lightly beaten
- 3 cups unbleached all-purpose flour

### Filling\*\*

- 8 ounces light cream cheese
- ½ cup sugar
- 3 tablespoons unbleached all-purpose flour
- 1 large egg, lightly beaten
- 2 teaspoons vanilla

### Finishing touches:

- Egg Glaze: beat 1 egg yolk and 1 tablespoon cold water
- Sparkling sugar, sliced almonds

\*If very warm liquids are used, the dough will not need long rising time, but *be sure to keep liquids under 130° F.*

\*\*Filling Option: Filling Option: Mix ½ cup dried cherries with 1,12 oz can Solo cherry pastry and cake filling + ½ tsp. almond flavoring

Nutrition Facts	
Serving Size (40g)	
Servings Per Container	
Amount Per Serving	
<b>Calories 110</b>	<b>Calories from Fat 30</b>
<b>% Daily Value*</b>	
<b>Total Fat 3.5g</b>	<b>5%</b>
Saturated Fat 2g	<b>10%</b>
Trans Fat 0g	
<b>Cholesterol 25mg</b>	<b>8%</b>
<b>Sodium 160mg</b>	<b>7%</b>
<b>Total Carbohydrate 17g</b>	<b>6%</b>
Dietary Fiber 1g	<b>4%</b>
Sugars 7g	
<b>Protein 3g</b>	
Vitamin A 4%	Vitamin C 0%
Calcium 2%	Iron 4%
<small>*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:</small>	
	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	

## Directions

1. Combine all of the dough ingredients, and mix and knead them together – by hand, mixer or bread machine – until you’ve made a soft, smooth dough. Allow the dough to rise, covered, for 30 minutes until it’s puffy (not necessarily doubled in bulk).

**Filling** - While the dough is rising, prepare the filling by mixing all of the ingredients together until smooth. Chill until ready to use.

## Assembly

1. Transfer the dough to a lightly oiled work surface, and divide it in half. Roll each half into a 12 x 8-inch rectangle. Spread half of the filling lengthwise down the center third of each rectangle.
2. Cut 1-inch-wide strips from each side of the filling out to the edges of the dough. Fold about an inch of dough at each end over the filling to contain it, then fold the strips, at an angle, across the filling, alternating from side to side to make a criss-cross pattern.

## Baking

1. Allow the braid to rise, covered, for 1 hour, until it’s almost doubled in size.
2. Preheat the oven to 350° F. Brush the braid top with the egg glaze and sprinkle with sparkling white sugar or almonds, if desired. Bake the braid in the preheated 350° F. oven for 35 to 40 minutes, or until it’s golden brown. Remove from the oven, and cool on a wire rack.

Recipe and illustration courtesy of King Arthur Flour Company—[www.KingArthurFlour.com](http://www.KingArthurFlour.com)

Illustrations from recipe booklet *Baking Across America* with King Arthur Flour.



# Want-to-go-with Cookies? Try these fun cookie dough shapes!

## Huge Scary Spiders

Yield: 20 (1 oz/28g) spiders

### Ingredients

2 ounces of unsweetened or semi-sweet chocolate  
1 1/4 cups all-purpose or whole wheat flour  
1 1/2 teaspoons baking powder  
1/4 teaspoon salt  
1/4 cup butter or margarine  
1 cup sugar  
1 large egg, beaten  
1 teaspoon vanilla extract  
40 red baking candies or "red hots"  
20 walnut or pecan halves



**Nutrition Facts:** One of 20 spiders (1 oz—28g) provides: 120 calories; Total fat, 5g; Sat. fat, 2.5g; Cholesterol, 15mg; Sodium, 90 mg; Potassium, 47 mg; Total Carbohydrate, 17g; Dietary fiber, >1g; Sugars, 10 g; Protein, 2g. Vit. A and Calcium, 2%; Iron 4%, Vit. C 0%

### Directions

1. Preheat oven to 375° F. Lightly grease or parchment-line baking sheets.
2. In a saucepan or microwave, melt chocolate with low heat. Let cool. In a small bowl, mix flour, baking powder and salt. In a medium bowl, beat margarine on low speed or by hand until smooth. Add sugar and beat until creamy. Stir in egg, vanilla and chocolate. Add flour mixture and mix well, forming a stiff dough.
3. To make a spider, shape a 2 inch flat oval for the body. Make the spider's head by flattening a circle about 1/2 inch in diameter.
4. Shape dough for eight legs, each about two inches long and less than 1/4-inch wide. Attach the head and legs to body. Put two red candies into head for eyes. Press the pecan or walnut half into the back for a design.
5. Bake for 5-8 minutes. Let spiders cool on baking sheet to avoid breaking when removing.

Recipe courtesy of The Sugar Association, [www.sugar.org](http://www.sugar.org)

## Favorite Teddy Bear Cookies

Yields: 18 (1.5 oz/43g) cookies

### Ingredients

1 cup granulated sugar  
3/4 cup butter, softened  
1 large egg  
2 teaspoons vanilla  
2 1/4 cups all-purpose flour  
1 teaspoon baking powder  
1/4 teaspoon salt  
2 (1-ounce) squares unsweetened baking chocolate, melted



**Nutrition Facts:** One Teddy Bear cookie (1.5 oz—43g) provides: 190 calories; Total fat, 9g; Sat. fat, 6g; Cholesterol, 30 mg; Sodium, 70 mg; Potassium, 50 mg; Total carbohydrate, 24g; Dietary fiber, >1g; Sugars, 11g Protein, 2g; Vit. A, 6%; Vitamin C, 0%; Calcium, 2%; Iron, 6%

### Directions

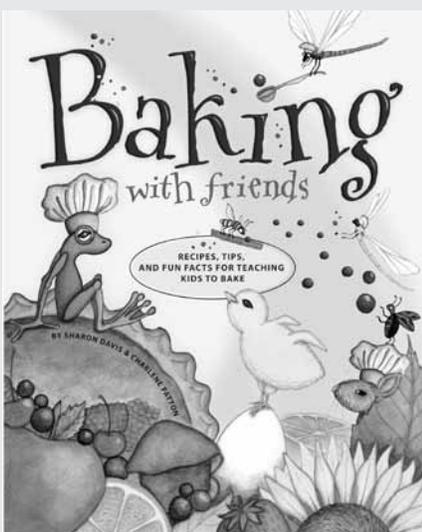
1. Heat oven to 375° F.
2. Combine sugar, butter, egg and vanilla in large mixer bowl. Beat at medium speed, scraping bowl often, until well mixed (1 to 2 minutes).
3. Reduce speed to low; add flour, baking powder and salt. Beat, scraping bowl often, until well mixed (1 to 2 minutes).
4. Divide dough in half. Place half of dough in medium bowl. Stir in chocolate by hand.
5. For each teddy bear: Form a portion of either color dough into one large (1-inch) ball for body; one medium (3/4-inch) ball for head; four small (1/2-inch) balls for arms and legs; two smaller balls for ears. Add additional small balls for eyes, nose and mouth, if desired. Press dough through a garlic press for crazy hair and press onto the head. Repeat with remaining dough, making either vanilla or chocolate teddy bears or mixing the doughs to make two-toned teddy bears.
6. To form each cookie, place large ball (body) on ungreased cookie sheet; flatten slightly. Attach head, arms, legs and ears by overlapping slightly onto body. Add nose, eyes and mouth. Use fork to make claws on paws. Paint if desired.
7. Bake for 7 to 8 minutes or until body is set. Cool 1 minute; remove from cookie sheet onto wire rack. Cool completely.

Recipe and photo courtesy of Land O' Lakes, [www.landolakes.com](http://www.landolakes.com)

## Local Connections: Shape Up! Your Food Enjoyment Factor

Far too often food has become something to unwrap, stuff down and run. Adding hands-on food time will reduce 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.



ILLUSTRATIONS BY: COLEEN MCINTYRE - EDITED BY: NICHOLAS BEATTY - AUDIO CD: PAMELA ATHERTON

*Baking with Friends*, a guide to baking with young people. [www.homebaking.org](http://www.homebaking.org)

### Double the learning... Book and Bake Enjoy a book while dough rests, rises or bakes.

A few great choices for this lab include:

#### Preschool-K:

*Bread, Bread, Bread.* Ann Morris and Ken Heyman  
*Little Red Hen and the Ear of Wheat.* Mary Finch.

#### Early elementary:

*Miss Spider's Tea Party.* David Kirk  
*Walter the Baker.* Eric Carle  
*Bread is for Eating.* David and Phyllis Gershator

#### Elementary:

*Everybody Bakes Bread.* Norah Dooley  
*The Sleeping Bread.* Stefan Czernecki and Timothy Rhodes  
*Bread Song.* Frederick Lipp

Select a local group with which to conduct a “Shape Up,” activity.



## For Teacher:

Remember to check to see if the location center 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
- teach parents as “first teachers” to enjoy this art with their children, adding a book list of great books to read along with shaping and baking
- spend a couple hours with older adults as “dough therapy,” talking with and shaping rolls to share at a meal or afternoon coffee or tea break
- “build bonds” between peers or across ages

#### Options:

1. If time allows, each person or teams can prepare Bread in a Bag. View instructional video on-line at [www.breadworld.com](http://www.breadworld.com)
2. Pre-prepare several batches of Refrigerator Potato Dough, (p.137) in the class lab for the group to divide and sculpt.(Go to the two bullets). 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!
- Prepare a “Shape Up Kit” –a washable plastic tub with surface and hand-cleaning items, baking pans (as needed), parchment, pan spray, plastic wrap, dough scaper/divider, food thermometer and aprons (disposable aprons are sold on-line for pennies).
3. Work together and prepare the dough on-site in a bread machine, mixer or food processor, then shape...and make someone's day!

From *Baking with Friends: Recipes, Tips and Fun Facts for Teaching Kids to Bake*

### The Thrill of Skill

#### Age-Appropriate Kitchen Tasks

Let older children help teach younger ones – everyone benefits!

#### 2 years old:

Proper hand washing  
Wipe table tops  
Play with safe utensils  
Scrub, wash, bear, wrap, break into pieces  
Move pre-measured ingredients from one place to another  
Add ingredients to a bowl

#### 3 years old: All of the above plus...

Handle dough, begin kneading, simple shaping  
Pour cool liquids into mixture  
Mix dry ingredients with wire whisk or spoon in extra large bowl  
Shake liquids  
Spread soft spreads  
Place things in trays

#### 4 years old: All of the above plus...

Peel loose skinned oranges; hard cooked eggs  
Form round shapes with dough  
Mash fruits (bananas) or cooked vegetables  
Cut with dull scissors (onion green onions, dried fruits)  
Set table

#### 5 to 6 years old: All of the above plus...

Help measure dry ingredients (spoon, level)  
Cut with a blunt knife (plastic or tableware)  
Use a hand held egg beater or whisk  
Crush crackers in a bag with a rolling pin  
Sprinkle ingredients on salads, cakes, cookies, casseroles

#### 6 to 8 years old: All of the above plus...

Clean surfaces before and after  
Wash fruits and/or vegetables  
Gather ingredients and equipment  
Grease or spray baking pans  
Measure dry ingredients  
Measure liquid ingredients  
Add measured dry and liquid ingredients into mixing bowl  
Learn to stack eggs  
Cut fruit, butter or margarine sticks on cutting board (plastic or stable knife)  
Push buttons on blenders, processors with adult  
Knead dough  
Shout out cues (adults help load products in hot oven)  
Wash dishes, put away ingredients or utensils

#### 9 to 12 years old: All of the above plus...

Learn safe knife skills (chopping, dicing, and cutting)  
Handle food equipment safely  
Place oven racks and load oven (safe over in cold)  
Safe operation of electric equipment (mixer, microwave, bread machine food processor, etc.)  
Follow a recipe (measure accurately, prepare a product)  
Read ingredient and food labels  
Safety handle stone ingredients/finished products  
Plan and prepare simple meals, snacks  
Clean up (how and what to wash in dishwasher or by hand)

#### 13 years old and up: All of the above plus...

Tasks requiring multiple preparation steps or close timing  
Create new flavor combinations, shapes or decoration  
Plan and prepare whole menus for meals or entertaining  
Make shopping lists and shop for ingredients  
Help younger children learn about food and how to prepare  
Enjoy cooking with peers



Consult The Thrill of Skill age-appropriate baking skills list found in *Baking with Friends* OR on-line at [www.homebaking.org](http://www.homebaking.org)

