Families:
Pilot Light Family Meal Lessons are designed to easily bring food education into your home. We recommend using the Family Resources in the following way:

1. Watch the Family Meal video for the lesson as a family.
2. Make the recipe as a family.
3. In the Common Core Connections section, children can learn through and about food while strengthening Common Core English Language Arts or Math skills.
4. Family Discussion questions and Extension Activities are provided to allow learners of all ages opportunities to participate in the learning experience!

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Pilot Light Family Meal Lesson

Lemon Thyme Blueberry Pound Cake
+ Grades 3-5 Common Core Math - Number and Operations - Fractions

Suggested Recipe Age Range: 7-11

Recipe by Chef Kelcy Scolnick

Lemon Thyme Blueberry Bread

Ingredients:

For the cake

- 1 1/2 cups flour sifted, plus 1Tbsp for blueberries
- 1tsp baking powder
- 1/4 t salt
- 2 tsp fresh thyme (or dried)
- zest of 2 lemons
- 8oz fresh or frozen blueberries
- 1/2 cup butter
- 1 cup sugar
- 2 eggs
- 1/2 cup milk

For the glaze

- Juice of 1 lemon
- 1/2 cup powdered sugar

Materials:

- 9in tube pan or springform pan with adjustments (see below)
- bowls for mixing
- measuring spoons, cups, and liquid measurer

- electric hand mixer or wooden spoon
- sifter or whisk (if you have one)

Directions:

1. Preheat oven to 350 and prepare your 9 inch tube cake pan by greasing it and lightly flouring. If you don't have a tube cake pan have no fears! You can use a 9 inch springform (or cake pan), an empty tin can with the label off, and dried beans or rice. Simply prepare the cake pan with grease and flour, place the can in the center and fill with beans or rice to weigh it down when the cakes is baking and boom! Homemade tube cake pan ready to go.
2. Sift all your dry ingredients together with the thyme and lemon zest and set aside. If you don't have a sifter, simply whisk your dry ingredients together. Get the blueberries ready by placing them in a separate bowl with 1 Tbsp flour and coating them. This will help the blueberries stay suspended in the mixture instead of all falling to the bottom.
3. Cream your sugar and butter together, add eggs one at a time making sure to combine well between and mix until smooth and fluffy, about1 minute with a mixer or 2-3 minutes by hand.
4. Working in batches, alternate adding the dry and wet into the mixture always starting and ending with dry until everything is mixed together. Add the blueberries and give it a gentle stir to combine, being careful not to break the blueberries.
5. Place batter in prepared pan and smooth out the top with the back of your spoon or spatula. Place in the oven and back for 1 hour, or until a toothpick comes out clean when placed near the center of the cake.
6. As the cake is baking, make the glaze by mixing lemon juice and sugar together.
7. Take finished cake out of the oven and allow to cool 10 minutes in the pan. Flip out onto a cooling rack and brush glaze all over the cake. I like to place a pan or parchment paper under my cooling rack to catch the drippings of the glaze for easy cleanup

Common Core Connections:

Grades 3-5

Common Core: Numbers and Operations - Fractions

CCSS.MATH.CONTENT.3.NF.A.1

Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*.

CCSS.MATH.CONTENT.3.NF.A.3.B

Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model.

CCSS.MATH.CONTENT.4.NF.A.2

Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

CCSS.MATH.CONTENT.4.NF.B.4.A

Understand a fraction *a*/*b* as a multiple of 1/*b*. *For example, use a visual fraction model to*

represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).

CCSS.MATH.CONTENT.5.NF.B.6
Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Students will convert the recipe using the scenario, "How could you make this bread if you only have a ¼ cup and a ¼ teaspoon at home?" Students will rewrite the recipe to show all cup and teaspoon measurements in fourths (2 cups = 8/4 cups or 8 one fourth cups) before following the recipe. Bonus: actually follow the recipe using only a ¼ cup and a ¼ teaspoon!

What does this mean?
Common Core Math is meant to prepare students for real-world problem solving. Providing a real-world scenario (baking without having the proper measuring devices) engages students to solve this problem using what they know about measurement, fractions, and equivalence.

In this lesson, you (the student) will be working on converting whole numbers (1 and 2) and fractions (½) into fourths.

What does this look like?
Materials needed:

- Paper and pencil
- ¼ measuring cups
- ¼ teaspoons

Directions:

1. Show students the recipe and read through it with them.
2. Present the following real world scenario (rewrite as necessary): "I wanted to make this recipe with all of you today, but we have a bit of a problem...I only have ¼ measuring cups and ¼ teaspoons! How can we still make this recipe using only ¼ measuring cups and ¼ teaspoons?" Students propose rewriting the recipe to show all measurements in fourths.
3. Students work alone, in groups, or in partners to convert all measurements into fourths. See below for rewritten recipe.
4. Ask students to prove, using paper/pencil or another method, how they know that these conversions are correct. Say, "We don't want our measurements to be any different than the original recipe. We want them to be perfectly equivalent. How do we know for sure that these are the accurate conversions?"

Solutions for reference:

For the cake

- 6/4 cups flour sifter, plus 1T for blueberries
- 4/4t baking powder
- 1/4 t salt
- 8/4t fresh thyme
- zest of 2 lemons
- 8oz fresh or frozen blueberries
- 1/2 cup butter (can be rewritten as 2/4 but no need to rewrite if using stick butter)
- 4/4 cup sugar
- 2 eggs
- 2/4 cup milk

For the glaze

- Juice of 1 lemon
- 2/4 cup powdered sugar

Family Discussion Questions:

Families/children could discuss or write about:

- Why are measurements useful? How does having a measurement system make our world or our lives easier?
- Cups and teaspoons measure the amount of a substance in cooking. What are other ways or units to measure amounts in cooking?
- What other fractions could we have used instead of fourths?
- When else might you need to convert something (distance, weight, units of measurement) into fractions?

Extension Activities:

Here are some suggestions for additional activities that relate to this recipe:

- This activity could be rewritten for other scenarios (only having a ⅛ cup or ⅓ cup would make the activity more challenging, for example!).
- This activity could be rewritten for much more challenging scenarios, such as only having a measuring cup that measures ounces.
- Young children could use 1-cup and ½-cup measuring cups to experiment and check that conversions are accurate. Determining that 2/4 *does* in fact fit exactly into a ½ measuring cup is a visual way for young children to see a conversion.
- Chocolate Bars (with divisions for breaking off pieces) offer a helpful and visual connection to fractions; breaking up a chocolate bar to show children that ½ is also equal to 2/4 could allow a deeper understanding of what exactly a fraction *is* in context of food.

This original Family Lesson was written by Pilot Light Food Education Fellow, Jessica Wood.