

August: Cooking measurements

August Numeracy: Cooking Measurements

Learn how to read, understand, write, add and subtract fractions. Read recipes and measure ingredients accordingly using cups, teaspoons, and Tablespoons. Learn how to double recipes and half recipes.

Materials include:

1. General explanation of unit
2. Terms for curriculum for all levels
3. Goals for each level
4. Suggested schedule for numeracy*
5. Content for teacher's "mini-lesson" per level
6. Worksheets per level
7. Instructions for class activity per level

General Explanation:

This month's numeracy lessons provide basic practice in using/calculating measurement in cooking. Students will learn through the 10 minute reviews how to read, write, understand, add and subtract fractions. Students will have two opportunities for hands-on practice with measurement and will have two lessons practicing doubling and halving recipes and problem solving using fractions and measuring cups/spoons.

****Dried beans, bowls, measuring cups and spoons (multiple sets) are needed this month. Ingredients and supplies for the final cooking project are also needed.**

<http://www.walmart.com/ip/Farberware-10pc-Measuring-Cup-and-Spoon-Set/20469614>

Ingredients for cooking:

- 3 cups Corn Chex® cereal
- 3 cups Rice Chex® cereal
- 3 cups Wheat Chex® cereal
- 1 cup mixed nuts
- 1 cup bite-size pretzels
- 1 cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- 6 tablespoons butter
- 2 tablespoons Worcestershire sauce
- 1 1/2 teaspoons seasoned salt
- 3/4 teaspoon garlic powder
- 1/2 teaspoon onion powder

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Terms for Curriculum for All Levels

Basic Numeracy Schedule: The schedule is designed as a four week unit. The teacher is responsible for configuring the schedule to the current month and year. Reviews, computer slots, and worksheet days are merely a suggestion. Adjust accordingly to meet the needs of your class.

mini-lesson: (ml) : Provided lesson plans for a short introduction to the material.

worksheet: (ws): Provided material for students; 3 per month.

Operation box: (ob): VSS worksheets in addition, subtraction, multiplication, and division**

10 minute review: Teacher picks a regular time every class for ten minutes of numeracy review. It is meant to be a quick practice of numeracy, primarily focused on receptive and expressive language.

The beginning of class or the end of class can be effective times. The teacher can have students turn to a clean notebook page, use their “math” notebook, or can have pre-cut papers ready to hand out.

Teacher reads: T reads and the class transcribes numbers

Student reads: S reads and the class transcribes (gives students practice speaking)

Checking Review Work: Students check their work. This can be a simple or creative process depending on time availability. Written answers are necessary in checking since the focus of the review is receptive/expressive language. This is also a time for practice with pronunciation or memorization of numbers/concept.

** Operation Boxes: (Continuation of October’s numeracy focus) I recommend that as a program you create four file boxes that contain practice worksheets for each of the functions (addition, subtraction, multiplication, division). It is best to offer a wide range of choices starting at very beginning levels and ending with more advanced worksheets. Students can then self-pace and work their way through the boxes during the year. Worksheets can come from websites offering free printables or workbooks.

August: Cooking measurements

Level 1

L1 Goals: Learn how to read, understand, and write fractions. Read recipes and measure ingredients accordingly using cups, teaspoons, and Tablespoons.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Fractions practice (**Fractions Idea sheet included)	Computer	10 min review: operations box worksheet	ml 1; ws1	Fraction Practice
Week 2	Fraction Practice	Computer	10 min review: operations box worksheet	ml 2; ws 2	Fraction Practice
Week 3	Fraction Practice	Computer	10 min review: operations box worksheet	ml 3; ws 3	Fraction Practice
Week 4	Fraction Practice	Computer	10 min review: operations box worksheet	ml 4: Cook using a recipe	Fraction Practice

* Teachers are responsible for coming up with their own 10 minute reviews for fractions. The included fractions idea sheet will help you plan the 10 minute reviews and help organize a progression of challenges for all math levels. Three different website suggestions offer additional (free) worksheet practice at every level.

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10 Minute Review: Teaching Fractions

You can vary the 10 minute review, by asking oral questions, writing them on the board as a question or a word problem, or playing a game. This month, the 10 minute reviews may need to be longer in order to give a quick lesson and then a little practice. Or, you may choose to give a lesson one day and the practice a different day.

1. Introduce the concept of fractions: use measuring cups, measuring pitcher, concrete objects
2. Introduce basic fractions; read and write them together; say fractions and students write; a student says a fraction and others write
3. Teach how to add fractions; give practice problems for individuals/pairs/groups
4. Teach how to subtract fractions; give practice problems for individuals/pairs/groups
5. Teach how to multiply fractions; give practice problems for individuals/pairs/groups
6. Teach how to divide fractions; give practice problems for individuals/pairs/groups
7. Teach how to order fractions; give practice problems for individuals/pairs/groups
8. Teach how to compare fractions; give practice problems for individuals/pairs/groups
9. Use free printable worksheets: (ranging from level 1- level 4)
<http://www.math-aids.com/Fractions/>
<http://www.math-drills.com/fractions.shtml>
<http://edhelper.com/fractions.htm>
10. Give students word problems to solve. Ex: The recipe calls for $\frac{3}{4}$ cup flour, but you only have a $\frac{1}{4}$ measuring cup (or $\frac{1}{2}$, etc.). How can you measure the correct amount of flour?
11. Give students measurements and have them double them or half them.
12. Read a recipe with one measurement incorrect (cups for teaspoons). Have students listen to the whole recipe and write down which measurement/ingredient sounds “off.”

August: Cooking measurements

Level 1: Mini lesson 1

Plan:

10 minutes for mini lesson (teacher led instruction)

15 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

Enough materials for several groups:

Dry beans

Bins/buckets

Measuring cups

Mini-lesson Content:

1. Introduce cups
 - 1 cup, $\frac{1}{2}$ cup, $\frac{1}{3}$ cup, and $\frac{1}{4}$ cup: show sizes and compare
 - Practice saying the fractions (one-half cup, one-third cup, one-fourth cup)
2. Model the parts of the activity:
 - Find the correct cup and filling the cup with beans
 - Filling 1 cup with $\frac{1}{4}$ cups (or $\frac{1}{2}$ cups)
 - Reading through the questions
3. Divide the class into small groups so that each group has a bucket of beans and the measuring cups. Students can take turns filling cups through the worksheet so everyone gets a chance.

Name _____

Measuring Beans with Cups

Did you measure it? Check the box.

- | | Yes | No |
|-------------------------------|--------------------------|--------------------------|
| 1. 1 cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. $\frac{1}{2}$ cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. $\frac{1}{3}$ cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. $\frac{1}{4}$ cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |

5. How many $\frac{1}{2}$ cups go into 1 cup? _____

6. How many $\frac{1}{4}$ cups go into 1 cup? _____

7. How many $\frac{1}{3}$ cups go into 1 cup? _____

8. What is the biggest cup? Circle one.

1 cup $\frac{1}{2}$ cup $\frac{1}{4}$ cup $\frac{1}{3}$ cup

9. What is the smallest cup? Circle one.

1 cup $\frac{1}{2}$ cup $\frac{1}{4}$ cup $\frac{1}{3}$ cup

10. $\frac{1}{4}$ cup + $\frac{1}{4}$ cup = _____

August: Cooking measurements

Level 1: Mini lesson 2

Plan:

10 minutes for mini lesson (teacher led instruction)

15 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

Enough materials for several groups:

Dry beans

Bins/buckets

Measuring spoons

Mini-lesson Content:

1. Introduce measuring spoons
 - 1 Tablespoon, 1 teaspoon, $\frac{1}{2}$ teaspoon, $\frac{1}{4}$ teaspoon compare
 - Practice saying the names and fractions (one-half teaspoon, one-fourth teaspoon)
 - Mention: Tablespoon has a capital T and teaspoon has a lower case t
2. Model the parts of the activity:
 - Find the correct spoon and fill the spoon with beans
 - Fill 1 Tablespoon with teaspoons –how many?
 - Read through the questions
3. Divide the class into small groups so that each group has a bucket of beans and the measuring spoons. Students can take turns filling spoons through the worksheet so everyone gets a chance.

Name _____

Measuring Beans with Spoons

Did you measure it? Check the box.

Yes

No

1. 1 Tablespoon of beans

2. 1 teaspoon of beans

3. $\frac{1}{2}$ teaspoon of beans

4. $\frac{1}{4}$ teaspoon of beans

5. How many teaspoons go into 1 Tablespoon? _____

6. How many $\frac{1}{2}$ teaspoons go into 1 teaspoon? _____

7. How many $\frac{1}{4}$ teaspoons go into 1 teaspoon? _____

8. What is the biggest spoon? Circle one.

1 Tablespoon

1 teaspoon

$\frac{1}{2}$ teaspoon

$\frac{1}{4}$ teaspoon

9. What is the smallest spoon? Circle one.

$\frac{1}{4}$ teaspoon

1 teaspoon

1 Tablespoon

$\frac{1}{2}$ teaspoon

10. $\frac{1}{4}$ teaspoon + $\frac{1}{2}$ teaspoon + $\frac{1}{2}$ teaspoon = _____

August: Cooking measurements

Level 1: Mini lesson 3

Plan:

15 minutes for mini lesson (teacher led instruction)

10 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

None

Mini-lesson Content:

1. Introduce concept of recipe
 - Who knows what a recipe is? Who uses recipes? Who doesn't like recipes?
 - Recipe: Directions on how to cook/bake something
2. Introduce ingredients list
 - The beginning part of a recipe; it tells what you need to cook and how much you need
 - An ingredients list uses cups and spoons to measure (and sometimes number of things)
3. Read through Chocolate Chip Cookie Ingredient List on worksheet
 - Read measurements/practice reading
 - Ask basic questions
 - Explain worksheet—using the ingredients list to answer questions (and circle/underline part).

Name _____

Reading an Ingredient List

Chocolate Chip Cookies:

2 $\frac{1}{4}$ cups flour

$\frac{1}{2}$ teaspoon baking soda

1 cup butter



$\frac{1}{2}$ cup sugar

$\frac{1}{2}$ cup brown sugar

1 $\frac{1}{2}$ teaspoons salt

2 eggs

2 cups chocolate chips

1. Circle the measurements that need **cups**. 
2. Underline the measurements that need **spoons**. 
3. How much flour do you need? _____
4. How much butter do you need? _____
5. How much salt do you need? _____
6. How much sugar do you need? _____
7. How much brown sugar do you need? _____

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Level 1: Culminating Group Activity

Plan:

10 minutes for warm up and directions (teacher led instruction)

20 minutes for cooking

5-10 minutes for review (class, groups, pairs)

Materials Needed:

Microwave

2 bowls

2 spoons

Paper towels

- 3 cups Corn Chex® cereal
- 3 cups Rice Chex® cereal
- 3 cups Wheat Chex® cereal
- 1 cup mixed nuts
- 1 cup bite-size pretzels
- 1 cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- 6 tablespoons butter
- 2 tablespoons Worcestershire sauce
- 1 1/2 teaspoons seasoned salt
- 3/4 teaspoon garlic powder
- 1/2 teaspoon onion powder

Activity Goal: Students will work together to measure out and “cook” Chex Party Mix. They will use their measurement skills to read the ingredients list and measure using cups and spoons. The primary goal for Level 1 is to read and accurately measure the ingredients. Following the rest of the recipe will be with strong support of the teacher.

Activity Description: The class will work together to measure ingredients and follow the recipe. With the aid of the teacher, they will follow the directions and finish making the Chex Mix.

- Review measurements for cups and spoons
- Read the ingredients and recipe several times and make a plan about who is doing what before you start

Original Chex Party Mix Recipe

Ingredients

- 3 cups Corn Chex® cereal
- 3 cups Rice Chex® cereal
- 3 cups Wheat Chex® cereal
- 1 cup mixed nuts
- 1 cup bite-size pretzels
- 1 cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- 6 tablespoons butter
- 2 tablespoons Worcestershire sauce
- 1 1/2 teaspoons seasoned salt
- 3/4 teaspoon garlic powder
- 1/2 teaspoon onion powder

Preparation Directions

1. In large microwavable bowl, mix cereals, nuts, pretzels and bagel chips; set aside.
2. In small microwavable bowl, microwave butter uncovered on High about 40 seconds or until melted. Stir in seasonings.
3. Pour over cereal mixture; stir until evenly coated.
4. Microwave uncovered on High 5 to 6 minutes, thoroughly stirring every 2 minutes. Spread on paper towels to cool. Store in airtight container.

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Level 2

L2 Goals: Learn how to read, understand, and write fractions. Read recipes and measure ingredients accordingly using cups, teaspoons, and Tablespoons.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Fractions Practice (**Fraction Idea sheet included)	10 min review: operations box worksheet	computer	ml 1, ws 1	Fractions Practice
Week 2	Fractions Practice	10 min review: operations box worksheet	computer	ml 2; ws 2	Fractions Practice
Week 3	Fractions Practice	10 min review: operations box worksheet	computer	ml 3; ws 3	Fractions Practice
Week 4	Fractions Practice	10 min review: operations box worksheet	computer	ml 4: cooking from a recipe	Fractions Practice

* Teachers are responsible for coming up with their own 10 minute reviews for fractions.

The included fractions idea sheet will help you plan the 10 minute reviews and help organize a progression of challenges for all math levels. Three different website suggestions offer additional (free) worksheet practice at every level.

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10 Minute Review: Teaching Fractions

You can vary the 10 minute review, by asking oral questions, writing them on the board as a question or a word problem, or playing a game. This month, the 10 minute reviews may need to be longer in order to give a quick lesson and then a little practice. Or, you may choose to give a lesson one day and the practice a different day.

1. Introduce the concept of fractions: use measuring cups, measuring pitcher, concrete objects
2. Introduce basic fractions; read and write them together; say fractions and students write; a student says a fraction and others write
3. Teach how to add fractions
4. Teach how to subtract fractions
5. Teach how to multiply fractions
6. Teach how to divide fractions
7. Teach how to order fractions
8. Teach how to compare fractions
9. Use free printable worksheets: (ranging from level 1- level 4)
<http://www.math-aids.com/Fractions/>
<http://www.math-drills.com/fractions.shtml>
<http://edhelper.com/fractions.htm>
10. Give students word problems to solve. Ex: The recipe calls for $\frac{3}{4}$ cup flour, but you only have a $\frac{1}{4}$ measuring cup (or $\frac{1}{2}$, etc.). How can you measure the correct amount of flour?
11. Give students measurements and have them double them or half them.
12. Read a recipe with one measurement incorrect (cups for teaspoons). Have students listen to the whole recipe and write down which measurement/ingredient sounds “off.”

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Level 2: Mini lesson 1

Plan:

10 minutes for mini lesson (teacher led instruction)

15 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

Enough materials for several groups:

Dry beans

Bins/buckets

Measuring cups

Mini-lesson Content:

1. Introduce cups
 - 1 cup, $\frac{1}{2}$ cup, $\frac{1}{3}$ cup, and $\frac{1}{4}$ cup: show sizes and compare
 - Practice saying the fractions (one-half cup, one-third cup, one-fourth cup)
2. Model the parts of the activity:
 - Find the correct cup and filling the cup with beans
 - Filling 1 cup with $\frac{1}{4}$ cups (or $\frac{1}{2}$ cups)
 - Reading through the questions
3. Divide the class into small groups so that each group has a bucket of beans and the measuring cups. Students can take turns filling cups through the worksheet so everyone gets a chance.

Name _____

Measuring Beans with Cups

Did you measure it? Check the box.

- | | Yes | No |
|-------------------------------|--------------------------|--------------------------|
| 1. 1 cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. $\frac{1}{2}$ cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. $\frac{1}{3}$ cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. $\frac{1}{4}$ cup of beans | <input type="checkbox"/> | <input type="checkbox"/> |

5. How many $\frac{1}{2}$ cups go into 1 cup? _____

6. How many $\frac{1}{4}$ cups go into 1 cup? _____

7. How many $\frac{1}{3}$ cups go into 1 cup? _____

8. How many $\frac{1}{4}$ cups go into $\frac{1}{2}$ cup? _____

9. Which is bigger? $\frac{1}{3}$ cup or $\frac{1}{4}$ cup? _____

10. What is the biggest cup? Circle one.

1 cup $\frac{1}{4}$ cup $\frac{1}{2}$ cup $\frac{1}{3}$ cup

11. What is the smallest cup? Circle one.

$\frac{1}{2}$ cup 1 cup $\frac{1}{4}$ cup $\frac{1}{3}$ cup

12. $\frac{1}{4}$ cup + $\frac{1}{4}$ cup = _____

13. $\frac{1}{2}$ cup + $\frac{1}{4}$ cup + $\frac{1}{4}$ cup = _____

14. 1 cup + 1 cup + $\frac{1}{2}$ cup = _____

August: Cooking measurements

Level 2: Mini lesson 2

Plan:

10 minutes for mini lesson (teacher led instruction)

15 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

Enough materials for several groups:

Dry beans

Bins/buckets

Measuring spoons

Mini-lesson Content:

1. Introduce measuring spoons
 - 1 Tablespoon, 1 teaspoon, $\frac{1}{2}$ teaspoon, $\frac{1}{4}$ teaspoon compare
 - Practice saying the names and fractions (one-half teaspoon, one-fourth teaspoon)
 - Tablespoon = Tbsp. or T. or tbsp
 - teaspoon = tsp. or t.
2. Model the parts of the activity:
 - Find the correct spoon and fill the spoon with beans
 - Fill 1 Tablespoon with teaspoons –how many?
 - Read through the questions
3. Divide the class into small groups so that each group has a bucket of beans and the measuring spoons. Students can take turns filling spoons through the worksheet so everyone gets a chance.

Name _____

Measuring Beans with Spoons

Did you measure it? Check the box.

Yes

No

1. 1 Tbsp. of beans

2. 1 tsp. of beans

3. $\frac{1}{2}$ tsp. of beans

4. $\frac{1}{4}$ tsp. of beans

5. How many teaspoons go into 1 Tablespoon? _____

6. How many $\frac{1}{2}$ teaspoons go into 1 teaspoon? _____

7. How many $\frac{1}{4}$ teaspoons go into 1 teaspoon? _____

8. How many $\frac{1}{4}$ teaspoons go into $\frac{1}{2}$ teaspoon? _____

9. How many $\frac{1}{2}$ teaspoons go into 1 Tablespoon? _____

10. What is the biggest spoon? Circle one.

1 Tablespoon

1 teaspoon

$\frac{1}{2}$ teaspoon

$\frac{1}{4}$ teaspoon

11. What is the smallest spoon? Circle one.

$\frac{1}{4}$ teaspoon

1 teaspoon

1 Tablespoon

$\frac{1}{2}$ teaspoon

12. $\frac{1}{4}$ teaspoon + $\frac{1}{2}$ teaspoon + $\frac{1}{2}$ teaspoon = _____

13. $\frac{1}{4}$ tsp. + $\frac{1}{4}$ tsp. + 1 Tbsp. = _____

14. $\frac{1}{2}$ tsp. + 1 tsp. + 2 Tbsp. = _____

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Level 2: Mini lesson 3

Plan:

15 minutes for mini lesson (teacher led instruction)

10 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

None

Mini-lesson Content:

1. Introduce concept of recipe
 - Who knows what a recipe is? Who uses recipes? Who doesn't like recipes?
 - Recipe: Directions on how to cook/bake something
2. Introduce ingredients list
 - The beginning part of a recipe; it tells what you need to cook and how much you need
 - An ingredients list uses cups and spoons to measure (and sometimes number of things)
3. Read through Chocolate Chip Cookie Ingredient List on worksheet
 - Read measurements/practice reading
 - Ask basic questions
 - Explain worksheet—using the ingredients list to answer questions (and circle/underline part).

Name _____

Reading an Ingredient List

Chocolate Chip Cookies:

2 $\frac{1}{4}$ cups flour

$\frac{1}{2}$ teaspoon baking soda

1 cup butter



$\frac{1}{2}$ cup sugar

$\frac{1}{2}$ cup brown sugar

1 $\frac{1}{2}$ teaspoons salt

2 eggs

2 cups chocolate chips

1. Circle the measurements that need **cups**. 
2. Underline the measurements that need **spoons**. 
3. How much flour do you need? _____
4. How much butter do you need? _____
5. How much salt do you need? _____
6. How much sugar do you need? _____
7. Which ingredients need $\frac{1}{2}$ cup? _____ and _____
8. Which measuring cups will you need to measure flour?

Circle cup(s).

1 cup

$\frac{1}{2}$ cup

$\frac{1}{3}$ cup

$\frac{1}{4}$ cup

August: Cooking measurements

Level 2: Culminating Group Activity

Plan:

10 minutes for warm up and directions (teacher led instruction)

20 minutes for cooking

5-10 minutes for review (class, groups, pairs)

Materials Needed:

Microwave

2 bowls

2 spoons

Paper towels

- 3 cups Corn Chex® cereal
- 3 cups Rice Chex® cereal
- 3 cups Wheat Chex® cereal
- 1 cup mixed nuts
- 1 cup bite-size pretzels
- 1 cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- 6 tablespoons butter
- 2 tablespoons Worcestershire sauce
- 1 1/2 teaspoons seasoned salt
- 3/4 teaspoon garlic powder
- 1/2 teaspoon onion powder

Activity Goal: Students will work together to measure out and “cook” Chex Party Mix. They will use their measurement skills to read the ingredients list and measure using cups and spoons. The primary goal for Level 2 is to read and accurately measure the ingredients with little help from the teacher. Following the rest of the recipe will be with strong support of the teacher.

Activity Description: The class will work together to measure ingredients and follow the recipe. With the aid of the teacher, they will follow the directions and finish making the Chex Mix.

- Review measurements for cups and spoons
- Read the ingredients and recipe several times and make a plan about who is doing what before you start

Original Chex Party Mix Recipe

Ingredients

- 3 cups Corn Chex® cereal
- 3 cups Rice Chex® cereal
- 3 cups Wheat Chex® cereal
- 1 cup mixed nuts
- 1 cup bite-size pretzels
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- 6 tablespoons butter
- 2 tablespoons Worcestershire sauce
- 1 1/2 teaspoons seasoned salt
- 3/4 teaspoon garlic powder
- 1/2 teaspoon onion powder

Preparation Directions

1. In large microwavable bowl, mix cereals, nuts, pretzels and bagel chips; set aside.
2. In small microwavable bowl, microwave butter uncovered on High about 40 seconds or until melted. Stir in seasonings.
3. Pour over cereal mixture; stir until evenly coated.
4. Microwave uncovered on High 5 to 6 minutes, thoroughly stirring every 2 minutes. Spread on paper towels to cool. Store in airtight container.

August: Cooking measurements

Level 3

L3 Goals: Learn how to read, understand, write, add and subtract fractions. Read recipes and measure ingredients accordingly using cups, teaspoons, and Tablespoons. Learn how to double recipes and half recipes.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	computer	Fraction Practice (**Fraction Idea sheet included)	10 min review: operations box worksheet	ml 1, ws 1	Fraction Practice
Week 2	computer	Fraction Practice	10 min review: operations box worksheet	ml 2; ws 2	Fraction Practice
Week 3	computer	Fraction Practice	10 min review: operations box worksheet	ml 3; ws 3	Fraction Practice
Week 4	computer	Fraction Practice	10 min review: operations box worksheet	ml 4: cooking from a recipe	Fraction Practice

* Teachers are responsible for coming up with their own 10 minute reviews for fractions.

The included fractions idea sheet will help you plan the 10 minute reviews and help organize a progression of challenges for all math levels. Three different website suggestions offer additional (free) worksheet practice at every level.

August: Cooking measurements

10 Minute Review: Teaching Fractions

You can vary the 10 minute review, by asking oral questions, writing them on the board as a question or a word problem, or playing a game. This month, the 10 minute reviews may need to be longer in order to give a quick lesson and then a little practice. Or, you may choose to give a lesson one day and the practice a different day.

1. Introduce the concept of fractions: use measuring cups, measuring pitcher, concrete objects
2. Introduce basic fractions; read and write them together; say fractions and students write; a student says a fraction and others write
3. Teach how to add fractions
4. Teach how to subtract fractions
5. Teach how to multiply fractions
6. Teach how to divide fractions
7. Teach how to order fractions
8. Teach how to compare fractions
9. Use free printable worksheets: (ranging from level 1- level 4)
<http://www.math-aids.com/Fractions/>
<http://www.math-drills.com/fractions.shtml>
<http://edhelper.com/fractions.htm>
10. Give students word problems to solve. Ex: The recipe calls for $\frac{3}{4}$ cup flour, but you only have a $\frac{1}{4}$ measuring cup (or $\frac{1}{2}$, etc.). How can you measure the correct amount of flour?
11. Give students measurements and have them double them or half them.
12. Read a recipe with one measurement incorrect (cups for teaspoons). Have students listen to the whole recipe and write down which measurement/ingredient sounds “off.”

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Level 3: Mini lesson 1

Plan:

10 minutes for mini lesson (teacher led instruction)

15 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

Enough materials for several groups:

Dry beans

Bins/buckets

Measuring cups

Mini-lesson Content:

1. Introduce measuring cups
 - 1 cup, $\frac{1}{2}$ cup, $\frac{1}{3}$ cup, and $\frac{1}{4}$ cup: show sizes and compare
 - Cups = c. or C.
 - Practice saying the fractions (one-half cup, one-third cup, one-fourth cup, $\frac{3}{4}$ cup (What makes $\frac{3}{4}$ cup?))
2. Introduce measuring spoons
 - 1 Tablespoon, 1 teaspoon, $\frac{1}{2}$ teaspoon, $\frac{1}{4}$ teaspoon compare
 - Practice saying the names and fractions (one-half teaspoon, one-fourth teaspoon)
 - Tablespoon = Tbsp. or T. or tbsp.
 - teaspoon = tsp. or t.
4. Model the parts of the activity:
 - Find the correct cup/spoon and fill with beans
 - Model 1 or 2 questions
 - Read through the questions
5. Divide the class into small groups so that each group has a bucket of beans and the measuring cups/spoons. Students can take turns filling cups/spoons through the worksheet so everyone gets a chance.

Name _____

Measuring Beans with Cups and Spoons

1. How many $\frac{1}{2}$ cups go into 1 cup? _____
2. How many $\frac{1}{4}$ cups go into 1 cup? _____
3. How many $\frac{1}{3}$ cups go into 1 cup? _____
4. How many $\frac{1}{4}$ cups go into $\frac{1}{2}$ cup? _____
5. Which is bigger? $\frac{1}{3}$ cup or $\frac{1}{4}$ cup? _____
6. How many teaspoons go into 1 Tablespoon? _____
7. How many $\frac{1}{2}$ teaspoons go into 1 teaspoon? _____
8. How many $\frac{1}{4}$ teaspoons go into 1 teaspoon? _____
9. How many $\frac{1}{4}$ teaspoons go into $\frac{1}{2}$ teaspoon? _____
10. How many $\frac{1}{2}$ teaspoons go into 1 Tablespoon? _____
11. How many Tablespoons go into $\frac{1}{4}$ cup? _____
12. How many Tablespoons go into 1 cup? _____
13. $\frac{1}{4} c + \frac{1}{2} c =$ _____
14. $\frac{3}{4} c + \frac{3}{4} c =$ _____
15. $1 c + 3 \text{ Tbsp.} =$ _____

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Level 3: Mini lesson 2

Plan:

10 minutes for mini lesson (teacher led instruction)

10 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

None

Mini-lesson Content:

1. Introduce concept of recipe
 - Who knows what a recipe is? Who uses recipes? Who doesn't like to use recipes?
 - Recipe: Directions on how to cook/bake something
2. Introduce ingredients list
 - The beginning part of a recipe; it tells what you need to cook and how much you need
 - An ingredients list uses cups and spoons to measure (and sometimes the number of things)
3. To "double" a recipe
 - You double a recipe when you want twice as much food. You can multiply every amount by 2 or add the same amount to the original amount to double it.
 - To double a recipe, double each ingredient. It will double the amount of food you make (or servings).

Name _____

Doubling the Recipe

Chocolate Chip Cookies:

2 $\frac{1}{4}$ cups flour

$\frac{3}{4}$ teaspoon baking soda

1 cup butter

$\frac{1}{2}$ cup sugar

$\frac{1}{2}$ cup brown sugar

1 $\frac{1}{2}$ teaspoons salt

2 eggs

3 cups chocolate chips

Makes 3 dozen cookies

Chocolate Chip Cookies:

1. Double the recipe. Write the amount of each ingredient on the lines above.

2. How many cookies does the doubled recipe make?

_____ dozen cookies

_____ cookies

3. What measuring cups and spoons do you need for this recipe?

4. How many ingredients are in this recipe? _____

August: Cooking measurements

Level 3: Mini lesson 3

Plan:

10 minutes for mini lesson (teacher led instruction)

10 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

None

Mini-lesson Content:

1. Review ingredients list
 - The beginning part of a recipe; it tells what you need to cook and how much you need
 - An ingredients list uses cups and spoons to measure (and sometimes the number of things)
2. To “half” a recipe
 - You half a recipe when you want $\frac{1}{2}$ as much food as the recipe makes. You can divide by 2 or think about what 2 measurements = the amount you want to cut. For example, if you want to cut $\frac{1}{2}$ cup in half...think back to what makes $\frac{1}{2}$ cup? ($\frac{1}{4}$ cup + $\frac{1}{4}$ cup). So, half of $\frac{1}{2}$ is $\frac{1}{4}$. You can also use physical measuring cups if that is helpful.
 - To half a recipe, half each ingredient. It will half the amount of food you make (or servings).

Name _____

Halving the Recipe

Chocolate Chip Cookies:

2 ½ cups flour

½ teaspoon baking soda

1 cup butter

½ cup sugar

½ cup brown sugar

1 ½ teaspoons salt

4 eggs

3 cups chocolate chips

Makes 3 dozen cookies

Chocolate Chip Cookies:

1. Half the recipe. Write the amount of each ingredient on the lines above.

2. How many cookies does the halved recipe make?

_____ dozen cookies

_____ cookies

3. What measuring cups and spoons do you need for this recipe?

4. Is doubling a recipe or halving a recipe easier? _____

August: Cooking measurements

Level 3: Culminating Group Activity

Plan:

10 minutes for warm up and directions (teacher led instruction)

20 minutes for cooking

5-10 minutes for review (class, groups, pairs)

Materials Needed:

Microwave

2 bowls

2 spoons

Paper towels

- 3 cups Corn Chex® cereal
- 3 cups Rice Chex® cereal
- 3 cups Wheat Chex® cereal
- 1 cup mixed nuts
- 1 cup bite-size pretzels
- 1 cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- 6 tablespoons butter
- 2 tablespoons Worcestershire sauce
- 1 1/2 teaspoons seasoned salt
- 3/4 teaspoon garlic powder
- 1/2 teaspoon onion powder

Activity Goal: Students will work together to measure out and “cook” Chex Party Mix. They will use their measurement skills to read the ingredients list and measure using cups and spoons. The primary goal for Level 3 is to read and accurately measure the ingredients(doubled) with little help from the teacher. Some support from the teacher will be necessary for following the rest of the recipe.

Activity Description: The class will work together to double the recipe, measure ingredients and follow the recipe. With the aid of the teacher, they will follow the directions and finish making the Chex Mix.

- Review measurements for cups and spoons
- Read the ingredients and recipe several times and make a plan about who is doing what before you start
- Review doubling a recipe

Original Chex Party Mix Recipe

Ingredients

- 1 ½ cups Corn Chex® cereal
- 1 ½ cups Rice Chex® cereal
- 1 ½ cups Wheat Chex® cereal
- ½ cup mixed nuts
- ½ cup bite-size pretzels
- ½ cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- 3 tablespoons butter
- 1 ½ tablespoons Worcestershire sauce
- ¾ teaspoons seasoned salt
- ½ teaspoon garlic powder
- ¼ teaspoon onion powder

Preparation Directions

1. Double the recipe. Cross out the old amount and write in the new amount.
2. In large microwavable bowl, mix cereals, nuts, pretzels and bagel chips; set aside.
3. In small microwavable bowl, microwave butter uncovered on High about 40 seconds or until melted. Stir in seasonings.
4. Pour over cereal mixture; stir until evenly coated.
5. Microwave uncovered on High 5 to 6 minutes, thoroughly stirring every 2 minutes. Spread on paper towels to cool. Store in airtight container.

August: Cooking measurements

Level 4

Learn how to read, understand, write, add and subtract fractions. Read recipes and measure ingredients accordingly using cups, teaspoons, and Tablespoons. Learn how to double recipes and half recipes.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Fractions Practice (**Fraction Idea sheet included)	ml 1, ws 1	10 min review: operations box worksheet	computer	Fractions Practice
Week 2	Fractions Practice	ml 2; ws 2	10 min review: operations box worksheet	Computer	Fractions Practice
Week 3	Fractions Practice	ml 3; ws 3	10 min review: operations box worksheet	Computer	Fractions Practice
Week 4	Fractions Practice	ml 4: cooking from a recipe	10 min review: operations box worksheet	Computer	Fractions Practice

* Teachers are responsible for coming up with their own 10 minute reviews for fractions. The included fractions idea sheet will help you plan the 10 minute reviews and help organize a progression of challenges for all math levels. Three different website suggestions offer additional (free) worksheet practice at every level.

10 Minute Review: Teaching Fractions

You can vary the 10 minute review, by asking oral questions, writing them on the board as a question or a word problem, or playing a game. This month, the 10 minute reviews may need to be longer in order to give a quick lesson and then a little practice. Or, you may choose to give a lesson one day and the practice a different day.

1. Introduce the concept of fractions: use measuring cups, measuring pitcher, concrete objects
2. Introduce basic fractions; read and write them together; say fractions and students write; a student says a fraction and others write
3. Teach how to add fractions
4. Teach how to subtract fractions
5. Teach how to multiply fractions
6. Teach how to divide fractions
7. Teach how to order fractions
8. Teach how to compare fractions
9. Use free printable worksheets: (ranging from level 1- level 4)
<http://www.math-aids.com/Fractions/>
<http://www.math-drills.com/fractions.shtml>
<http://edhelper.com/fractions.htm>
10. Give students word problems to solve. Ex: The recipe calls for $\frac{3}{4}$ cup flour, but you only have a $\frac{1}{4}$ measuring cup (or $\frac{1}{2}$, etc.). How can you measure the correct amount of flour?
11. Give students measurements and have them double them or half them.
12. Read a recipe with one measurement incorrect (cups for teaspoons). Have students listen to the whole recipe and write down which measurement/ingredient sounds “off.”

August: Cooking measurements

Level 4: Mini lesson 1

Plan:

10 minutes for mini lesson (teacher led instruction)

15 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

Enough materials for several groups:

Dry beans

Bins/buckets

Measuring cups

Mini-lesson Content:

1. Introduce measuring cups
 - 1 cup, $\frac{1}{2}$ cup, $\frac{1}{3}$ cup, and $\frac{1}{4}$ cup: show sizes and compare
 - Cups = c. or C.
 - Practice saying the fractions (one-half cup, one-third cup, one-fourth cup, $\frac{3}{4}$ cup (What makes $\frac{3}{4}$ cup?))
2. Introduce measuring spoons
 - 1 Tablespoon, 1 teaspoon, $\frac{1}{2}$ teaspoon, $\frac{1}{4}$ teaspoon compare
 - Practice saying the names and fractions (one-half teaspoon, one-fourth teaspoon)
 - Tablespoon = Tbsp. or T. or tbsp.
 - teaspoon = tsp. or t.
3. Model the parts of the activity:
 - Find the correct cup/spoon and fill with beans
 - Model 1 or 2 questions
 - Read through the questions
4. Divide the class into small groups so that each group has a bucket of beans and the measuring cups/spoons. Students can take turns filling cups/spoons through the worksheet so everyone gets a chance.

Name _____

Measuring Beans with Cups and Spoons

1. How many $\frac{1}{2}$ cups go into 3 cups? _____
2. How many $\frac{1}{4}$ cups go into $2\frac{1}{2}$ cups? _____
3. How many $\frac{1}{3}$ cups go into $1\frac{2}{3}$ cup? _____
4. How many $\frac{1}{4}$ cups go into $\frac{3}{4}$ cup? _____
5. How many teaspoons go into 1 Tablespoon? _____
6. How many $\frac{1}{2}$ teaspoons go into 2 Tablespoons? _____
7. How many $\frac{1}{4}$ tsps. go into 1 tsp.? _____
8. How many $\frac{1}{4}$ tsps. go into $\frac{1}{2}$ tsp.? _____
9. How many Tbsps. go into $\frac{1}{4}$ c.? _____
10. How many Tbsps. go into $\frac{1}{2}$ c.? _____
11. How many tsps. go into $\frac{1}{2}$ c.? _____
12. $\frac{1}{4}$ c + $\frac{1}{2}$ c = _____
13. $\frac{3}{4}$ c + $\frac{3}{4}$ c = _____
14. $\frac{3}{3}$ c + 4 Tbsp. = _____

August: Cooking measurements

Level 4: Mini lesson 2

Plan:

10 minutes for mini lesson (teacher led instruction)

10 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

None

Mini-lesson Content:

1. Introduce concept of recipe
 - Who knows what a recipe is? Who uses recipes? Who doesn't like to use recipes?
 - Recipe: Directions on how to cook/bake something
2. Introduce ingredients list
 - The beginning part of a recipe; it tells what you need to cook and how much you need
 - An ingredients list uses cups and spoons to measure (and sometimes the number of things)
3. To "double" a recipe
 - You double a recipe when you want twice as much food. You can multiply every amount by 2 or add the same amount to the original amount to double it.
 - To double a recipe, double each ingredient. It will double the amount of food you make (or servings).

Name _____

Doubling the Recipe

Chocolate Chip Cookies:

2 $\frac{3}{4}$ cups flour

$\frac{3}{4}$ teaspoon baking soda

1 cup butter

$\frac{1}{2}$ cup sugar

$\frac{3}{4}$ cup brown sugar

1 $\frac{1}{2}$ teaspoons salt

3 eggs

2 $\frac{1}{2}$ cups chocolate chips

Makes 3 dozen cookies

Chocolate Chip Cookies:

1. Double the recipe. Write the amount of each ingredient on the lines above.

2. How many cookies does the doubled recipe make?

_____ dozen cookies

_____ cookies

3. What measuring cups and spoons do you need for this recipe?

4. What is the smallest measurement in this recipe?

August: Cooking measurements

Level 4: Mini lesson 3

Plan:

10 minutes for mini lesson (teacher led instruction)

10 minutes for individual work (student only)

10 minutes for review (class, groups, pairs)

Materials Needed:

None

Mini-lesson Content:

1. Review ingredients list
 - The beginning part of a recipe; it tells what you need to cook and how much you need
 - An ingredients list uses cups and spoons to measure (and sometimes the number of things)
2. To “half” a recipe
 - You half a recipe when you want $\frac{1}{2}$ as much food as the recipe makes. You can divide by 2 or think about what 2 measurements = the amount you want to cut. For example, if you want to cut $\frac{1}{2}$ cup in half...think back to what makes $\frac{1}{2}$ cup? ($\frac{1}{4}$ cup + $\frac{1}{4}$ cup). So, half of $\frac{1}{2}$ is $\frac{1}{4}$. You can also use physical measuring cups if that is helpful.
 - To half a recipe, half each ingredient. It will half the amount of food you make (or servings).
3. Point out conversion chart on the worksheet. The students will need to use it to reduce $\frac{3}{4}$ cup and a few other measurements.

Name _____

Halving the Recipe

Conversions:	$\frac{1}{4}$ cup = 4 Tbsps.	1 Tbsp. = 3 tsps.
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Chocolate Chip Cookies:

2 $\frac{1}{4}$ cups flour

$\frac{1}{2}$ teaspoon baking soda

1 cup butter

$\frac{3}{4}$ cup sugar

$\frac{3}{4}$ cup brown sugar

3 teaspoons salt

3 eggs

3 cups chocolate chips

Makes 3 dozen cookies

Chocolate Chip Cookies:

1. Half the recipe. Write the amount of each ingredient on the lines above.

2. How many cookies does the halved recipe make?

_____ dozen cookies

_____ cookies

3. What measuring cups and spoons do you need for this recipe?

4. Is doubling a recipe or halving a recipe easier? _____

August: Cooking measurements

Level 4: Culminating Group Activity

Plan:

10 minutes for warm up and directions (teacher led instruction)

20 minutes for cooking

5-10 minutes for review (class, groups, pairs)

Materials Needed:

Microwave

2 bowls

2 spoons

Paper towels

- 3 cups Corn Chex® cereal
- 3 cups Rice Chex® cereal
- 3 cups Wheat Chex® cereal
- 1 cup mixed nuts
- 1 cup bite-size pretzels
- 1 cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- 6 tablespoons butter
- 2 tablespoons Worcestershire sauce
- 1 1/2 teaspoons seasoned salt
- 3/4 teaspoon garlic powder
- 1/2 teaspoon onion powder

Activity Goal: Students will work together to measure out and “cook” Chex Party Mix. They will use their measurement skills to read the ingredients list and measure using cups and spoons. The primary goal for Level 4 is to read and accurately measure the ingredients (halved) with little help from the teacher. Little support from the teacher should be necessary for following the rest of the recipe.

Activity Description: The class will work together to half the recipe, measure ingredients and follow the recipe. They will follow the directions and finish making the Chex Mix.

- Review measurements for cups and spoons
- Read the ingredients and recipe several times and make a plan about who is doing what before you start
- Review halving a recipe

Original Chex Party Mix Recipe

Ingredients

- 6 cups Corn Chex® cereal
- 6 cups Rice Chex® cereal
- 6 cups Wheat Chex® cereal
- 2 cup mixed nuts
- 2 cup bite-size pretzels
- 2 cup garlic-flavor bite-size bagel chips or regular-size bagel chips, broken into 1-inch pieces
- $\frac{3}{4}$ cup butter
- $\frac{1}{4}$ cup and 2 tablespoons Worcestershire sauce
- 1 Tbsp. seasoned salt
- 1 teaspoon garlic powder
- $\frac{1}{2}$ teaspoon onion powder

Preparation Directions

1. Half the recipe. Cross out the old amount and write in the new amount.
2. In large microwavable bowl, mix cereals, nuts, pretzels and bagel chips; set aside.
3. In small microwavable bowl, microwave butter uncovered on High about 40 seconds or until melted. Stir in seasonings.
4. Pour over cereal mixture; stir until evenly coated.
5. Microwave uncovered on High 5 to 6 minutes, thoroughly stirring every 2 minutes. Spread on paper towels to cool. Store in airtight container.