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A young girl and her mother shop for vegetables and make soup together for their family meal.

Ages: 3 to 6 years

ATOS Reading Level:
2.0

Lexile: 440L

ISBN: 9781250127723

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Soup Day

What ingredients would you use to make a pot of soup?

Topics: comparison, counting, shape recognition

Activities To Do Together:

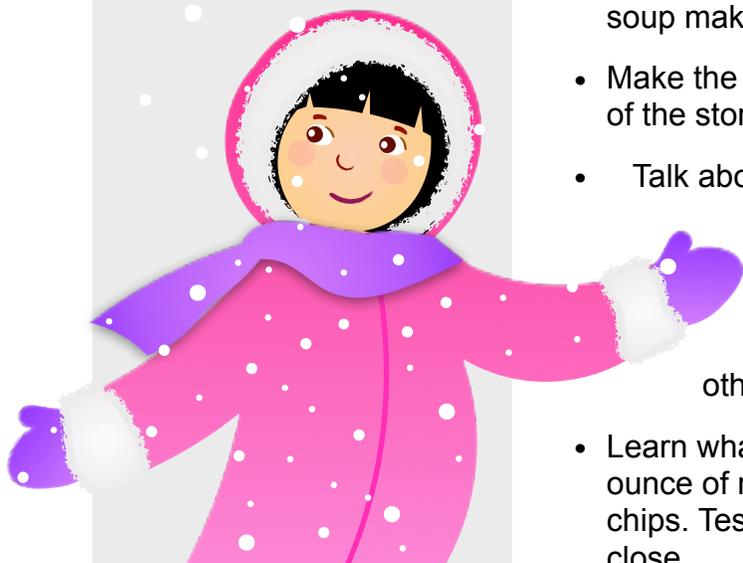
Use the book *Soup Day* to explore how math is related to the art of cooking. Cooking provides many mathematical opportunities that include measurement, fractions, ratios, and time.

As you read the book together:

- Compare the seven ingredients in the basket. Talk about how the ingredients are similar and different. What do the parsley, zucchini, and celery have in common? Which ingredients are long and narrow? Which are round? How are celery, carrots, and parsley alike? How are they different?
- Notice the different shapes of the chopped vegetables. What shape was the cut zucchini? The cut carrot?
- The vegetables were used to make one pot of soup. Talk about how many vegetables would be needed to make two pots of soup and three pots of soup.
- Talk about the foods your family eats during different times of the year. What do you like to eat when the weather is cold? When the weather is hot? Does the time of year make a difference in what you like to eat?

When you are done reading *Soup Day*:

- Ask your child to tell you about the steps involved with soup making. What happens first, second, next, and last?
- Make the recipe for Snowy Day Vegetable Soup at the end of the story or make another favorite recipe.
- Talk about kitchen safety with hot and sharp objects.
 - Explore and compare different measuring tools. The story recipe uses tablespoons, teaspoons, cups, $\frac{1}{2}$ cups, and $\frac{1}{4}$ cups. How do these units of measurement compare to each other?
- Learn what the weight of an ounce feels like. Estimate an ounce of rice, an ounce of pasta, or an ounce of chocolate chips. Test with a kitchen scale to see if your estimate is close.



Conversations During Daily Routines with Infants and Toddlers:

1. Snack time - Peel an orange. Count the orange segments together as you eat them.
2. Eating time - Count the food on your plate. For example, "You have three slices of apple. One, two, three. There are two pieces of bread in your sandwich. One, two."
3. Breakfast time - Eating a bowl of cereal? Talk about what you do first, second, next, and last. First, we pour the cereal in the bowl, second, we pour the milk, next we eat the cereal, and last, we wash the spoon and bowl.
4. Picnic time - Cut sandwiches, fruits, and vegetables into shapes. Eat some circles, rectangles, triangles, and squares.

Questions for Mathematical Thinking:

1. What kind of meal would you make? What would you use to make it? What would you do first?
2. In the story Mommy bought two shiny onions to make one pot of soup. How many onions would she need to make three pots of soup? How did you figure that out?
3. What shapes do you see in the pot of soup in the story?
4. In the story Mommy chops the vegetables. The carrots became circles. Which of the other vegetables do you think would become circles when sliced? Why do you think so?
5. When Mommy poured the broth into the big pot it made a loud "Sssssss" sound. Why do you think that happened?

Early Math Project Resources:

[Coffee Mug Cupcakes](#)

- [Lighthouse Vanilla Cupcake in a Mug](#)

[Lighthouse Salad](#)

[Soup Sort](#)

- [Soup Day Vegetables](#)

Follow this [link](#) for additional online resources

Vocabulary

Math words found in the story: 1/2, 1/4, adds, big, circles, cubes, cup, different, everything, five, four, high, increase, inside, little, long, low, medium, minutes, one, on top, ounces, pinch, reduce, shapes, six, tablespoon, teaspoon, the rest, three, tiny, two

Related math words: first, fractions, half, measure, quarter, second, third, whole

Words to build Reading Comprehension:

Comprehension: al dente, brightest, broth, confetti, diced, escape, freshest, garnish, parsley, saucepan, simmer, sizzle, spices, stock, stockpot, translucent

Spanish Title: N/A

Related Books: *Cook it!* by Georgie Birkett; *Pretend Soup and Other Real Recipes* by Mollie Katzen and Ann Henderson; *Salad People and More Real Recipes* by Mollie Katzen; *Bee-bim Bop!* by Linda Sue Park

This link to the [World Catalog](#) will help you find *Soup Day* in the public library.

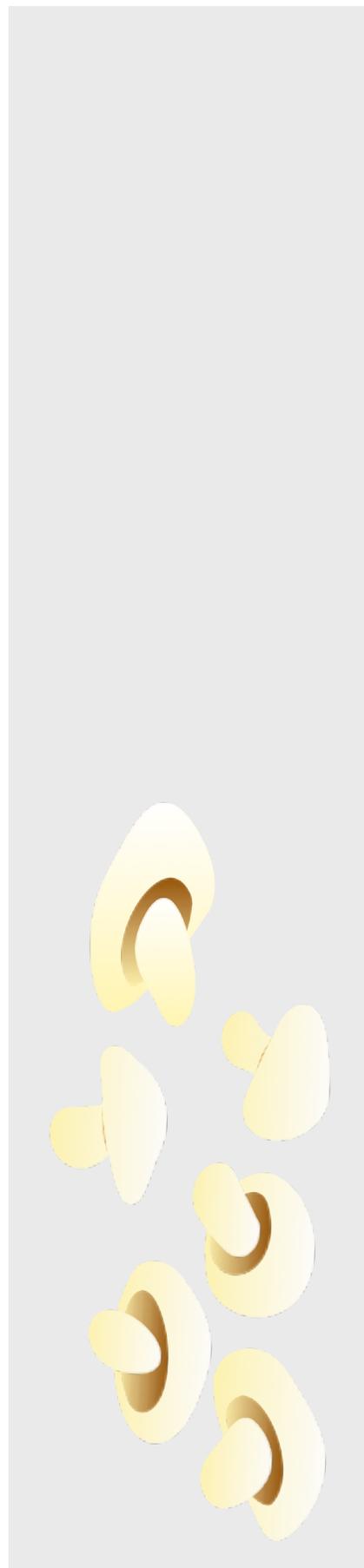
Math Connections:

Cooking is an opportunity to count, measure, compare, and talk about sequencing. It's a hands-on way to explore cause and effect, letting children observe what happens when ingredients combine and how food changes as it is heated or cooled. Recipes require tasks to be completed in a given order which is great practice with following directions. Children see first-hand how their creations change when steps are omitted or followed in a different order than given in the recipe. Cooking is a real-life way to learn about estimating, time, unit conversions, problem solving, and fractions.

Begin cooking with children when they are very young, start simple, and use recipes that aren't too complicated. The guidelines below are broken down by age, however, children grow and develop at their own rate. It might be appropriate for some 7-year-old children to cook with a heat source with adult supervision. Some 5-year-old children may be ready to do this as well while some 9-year-old children may not be quite ready. Plan your kitchen adventures so they are appropriate for your child's interest and readiness. Celebrate where they are developmentally and enjoy your time together in the kitchen.

Toddlers often enjoy helping in the kitchen. Support their success with simple recipes that don't take too long or require too many steps or ingredients. You can reinforce math concepts by counting ingredients together. Use sequencing words while following the steps in the recipe - words like "first," "second," "next," and "last" to describe what you're doing together. Tasks that may be appropriate for toddlers include stirring, squeezing, pouring, whisking, sprinkling, brushing, mashing, kneading, tearing and washing ingredients. Toddlers may enjoy adding ingredients to the food you're making or using cookie cutters to cut shapes from dough.

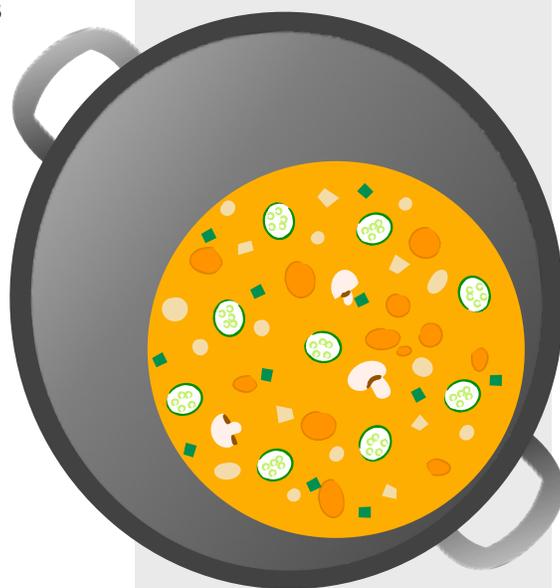
Depending on their fine motor skills, preschoolers and kindergarteners may be ready to peel, chop, cut, and grate. They may also be ready to roll dough, break eggs, use measuring spoons and cups, sort ingredients, and divide food into equal portions. Involve your child in the cooking process by deciding what you want to make together, figuring out the ingredients needed, and shopping for these ingredients together. At the grocery store, encourage your child to compare prices and use scales to weigh produce.



Elementary school age children may be ready to cook with a heat source and use electric kitchen appliances with adult supervision. They may have the fine motor skills to peel, slice, and chop food. They may enjoy experimenting with recipes, finding out what happens when ingredients are substituted, and modifying recipes by doubling, tripling, or halving the ingredients. They may enjoy the challenge of creating a meal within a certain budget or planning a meal to take advantage of produce that's in season.

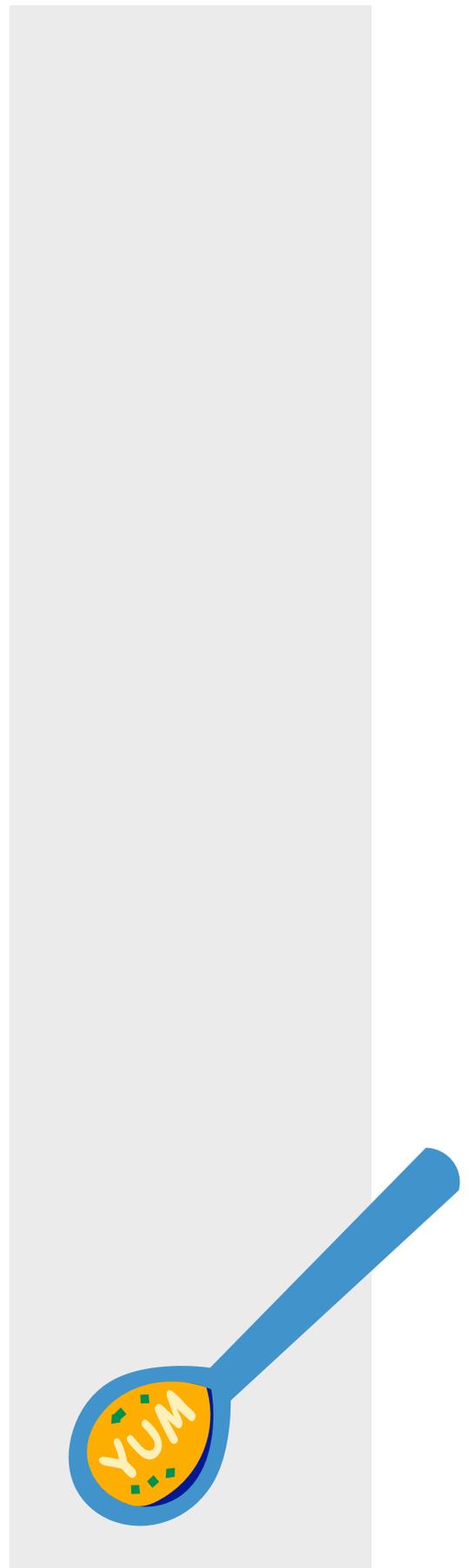
All of the following math concepts are supported by cooking:

- Comparing
 - Talk about how ingredients are alike and different. How is salt like sugar? How is it different?
- Counting
 - Count ingredients. If the recipe calls for 6 cups of water, ask your child to count the cups as they add them to what you are cooking. Count the carrot rounds you chop together.
- Estimating
 - Become familiar with standard measurements used in cooking. Ask your child - Does that look like a teaspoon of pepper? Is that about a $\frac{1}{4}$ cup or $\frac{1}{2}$ cup? About how many people do you think we can serve with this soup?
- Fractions
 - Explore measuring cups. How many quarter cups are in one cup? Find out. How many half cups are in one cup?
- Measuring
 - Use cups, tablespoons, and teaspoons. Help your child learn to be precise when using these tools.
- Money and Budgeting
 - Involve your child in planning meals. How much will it cost to make a meal? At the cash register, have your child conduct the transaction, counting paper money and coins.



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- Problem Solving
 - How do you cook a meal within a budget? What do you do if you are missing an ingredient? How do you increase a recipe if you need to feed more people?
- Ratios
 - Ratios compare one thing to another. If you need 1 cup of water for every 2 cups of flour, how many cups of flour do you need for 3 cups of water?
- Sequencing
 - Use sequencing words like “first,” “second,” “third,” “then,” “next,” “last,” “before,” “after,” etc. Arrange the ingredients you’ll use in the order you will need them.
- Sorting
 - Group food together by type. What foods belongs in the cupboard, the refrigerator, the freezer, the vegetable drawer? Sort ingredients by type. What are the liquid ingredients, the dry ingredients, ingredients that need to be chopped?
- Time
 - Backward map when you need to begin cooking to have your meal done at a certain time. Plan for prep time, cooking time, and serving time. When do you need to start cooking? Pay attention to how long foods need to be cooked and use a clock or timer to cook foods for the right amount of time.
- Unit Conversions
 - Learn some common unit conversions, for example, there are 8 ounces in a cup, 2 cups in a pint, 4 cups in a quart, and 16 cups in a gallon.



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Age Level	Related Infant Toddler Foundations , Preschool Foundations and CA State Standards
Infant/ Toddler	<p>Classification The developing ability to group, sort, categorize, connect, and have expectations of objects and people according to their attributes</p> <p>Attention Maintenance The developing ability to attend to people and things while interacting with others and exploring the environment and play materials</p>
Preschool/ TK	<p>Algebra and Functions 1.0 Children begin to sort and classify objects in their everyday environment</p> <p>Measurement 1.0 Children expand their understanding of comparing, ordering, and measuring objects</p>
Kindergarten	<p>Measurement and Data K.MD 1 Describe and compare measurable attributes</p> <p>Geometry K.G.1. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)</p>

