

BIG IDEA 1 Introduce

1 WATCH THE VIDEO

GO online
Math on Location Videos
 from The Futures Channel

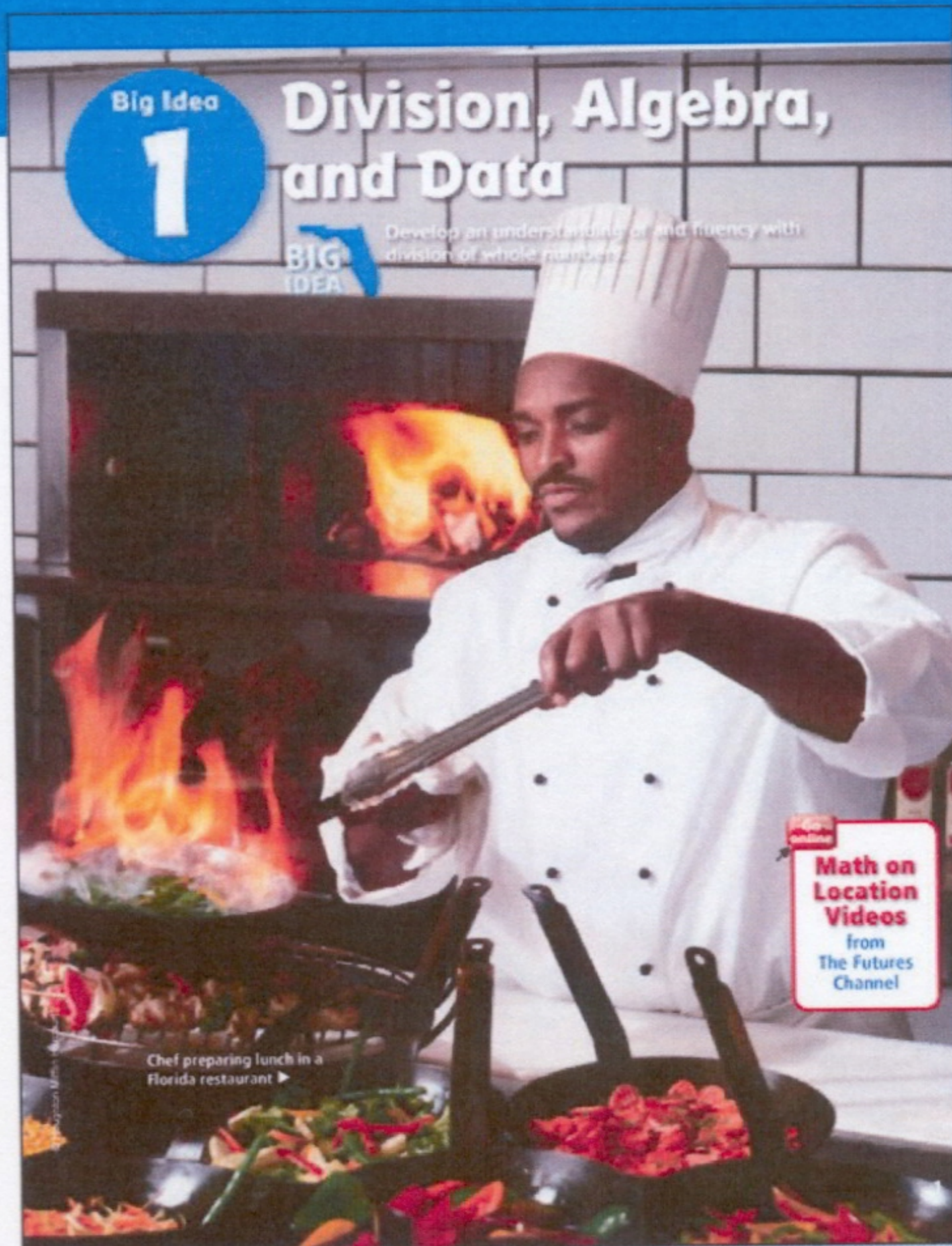
Use the questions below to help students prepare to watch the Math on Location Video, In the Chef's Kitchen. You may wish to write a few key words or questions on the board for students to refer to as they watch the video.

Tell students to ask themselves the following questions as they watch the video:

- What is the main topic of the video?
 Possible answer: The work of a restaurant chef
- How does the topic relate to mathematics? Possible answer: A chef needs math for ordering and preparing the right amounts of food for expected numbers of people.
- Listen for these important words and terms. What does each have to do with the work done in a kitchen?
 Answers will vary.

chef
 menu
 recipe
 ingredients

At the conclusion of the video, take a few minutes to revisit the questions above. Be sure students have the information and understanding they will need to work on the Big Idea Project on the next page.



Big Idea 1 Division, Algebra, and Data

Develop an understanding of and fluency with division of whole numbers.

Math on Location Videos
 from The Futures Channel

Florida Benchmarks Practice p. P1-P2

Big Idea 1

Math on Location Project
In the Chef's Kitchen

Plan

You need to adjust a recipe that makes 100 servings to make just 25 servings. Decide what math operation to use to change 100 to 25.

Go Beyond

Read the recipe in your math book for 100 servings of Zesty Citrus Soup.

Divide each ingredient you can divide easily. Write the amount of each in the recipe for 25 servings.

The chef has lunch items and divide evenly without a remainder. Talk to your partner about how to divide the left over cup into 4 equal parts.

I would use these ingredients to make 25 servings:

4 c orange juice, 4 c red lentils
 2 tsp orange zest
 4 apples, 4 butternut squashes
 12 shallots
 6 1/2 c of chicken broth
 3 tsp powdered ginger
 2 tsp nutmeg, 2 tsp coriander, 2 tsp powdered mustard

Reflect

How much orange juice did you divide you would need for 25 servings? How did you decide on 25 servings? How did you decide how much chicken broth you would need?

Possible answer:
 100 serving ÷ 4 = 25 servings, so I should divide the amounts by 4.
 1 1/2 c of orange juice ÷ 4 = 3/8 c of orange juice
 For the chicken broth, I know that 25 ÷ 4 = 6 R1.
 I can write the remainder as a fraction: 1/4 cups.

Go Beyond

Here's a recipe for Zesty spaghetti to feed 100 people. The ingredients are:

20 lb. of thin spaghetti
 6 lb. of ground beef
 20 large cans of tomatoes
 17 six-ounce cans of tomato paste

Decide how to adjust this recipe to feed just 25 people.

If you wanted to make this spaghetti recipe for your family, what amount of each ingredient would you need?

Possible answer:
 2 lb thin spaghetti
 1 1/2 lb ground beef
 2 large cans of tomatoes
 1 1/2 six-ounce cans tomato paste

BIG IDEA Project

with Math on Location Videos

In the Chef's Kitchen

Restaurant chefs estimate the amount of food they need to buy based on how many diners they expect. They usually use recipes that make enough to serve large numbers of people.

Project

You will begin to learn about the Big Idea when you work on this project.

Florida is the top producer of oranges in the United States. The recipe for Zesty Citrus Soup makes 100 servings. Suppose you and a partner want to make this recipe for 25 friends. Adjust the amount of each ingredient to make just 25 servings.

Zesty Citrus Soup (25 servings)

- 4 c orange juice
- 2 tsp orange zest
- 4 Granny Smith apples
- 4 butternut squashes
- 4 c of red lentils
- 12 shallots
- 6 $\frac{1}{4}$ c of chicken broth
- 3 tsp powdered ginger
- 2 tsp nutmeg
- 2 tsp coriander
- 2 tsp powdered mustard

Completed by _____

2

Important Facts

Zesty Citrus Soup (100 servings)

- 16 cups orange juice
- 8 teaspoons orange zest
- 16 Granny Smith apples
- 16 butternut squashes
- 16 cups red lentils
- 48 shallots
- 25 cups chicken broth
- 12 teaspoons powdered ginger
- 8 teaspoons nutmeg
- 8 teaspoons coriander
- 8 teaspoons powdered mustard



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2 DO THE BIG IDEA PROJECT

In the Chef's Kitchen Project

- Before students begin work, explain that they may present their project as a written report, a poster, or a graph.
- Have students read the opening sentences of In the Chef's Kitchen, along with the description of the project
- Ask volunteers to describe the project in their own words. Be sure students understand that all the information they need to complete the project is contained in the Important Facts chart. If you would like to do more with the project, you may wish to have students complete pages P1–P2 in the Florida Benchmarks Practice Book.

Math Talk To help students get started, ask the following questions:

- Why does a chef need to know which menu items are the most popular?
Possible answer: Food needs to be bought in advance. A chef needs to know which menu items sell best in order to buy enough ingredients to make them.

3 EXTEND THE PROJECT

2-Day Project

You may extend the project by telling students to do the following:

Bring a recipe to class. Choose a family favorite or one that you copy from a newspaper, magazine, or cookbook. Be sure to include how many servings your recipe makes.

Figure out how much of each ingredient you would need to make either more or fewer servings. Decide whether to multiply or divide to do this. Present your work to the class and explain your thinking.

Project Scoring Rubric

- 2** Demonstrates a complete understanding of the project. Makes full use of the Important Facts. Presents project clearly and completely.
- 1** Demonstrates a partial understanding of the project. Uses the Important Facts, but makes errors in applying them. Makes a good, but incomplete attempt at presenting the project.
- 0** Demonstrates little understanding of the project. Fails to use the Important Facts and to present accurate and complete conclusions.