

Cooking for a Small Army

Purpose

Students will understand when to use ounces for measuring weight and the relationship to pounds.

Materials

For the teacher: 3 or 4 empty food containers, transparency of Black Line Master (BLM) *Cooking for a Small Army*, chalk, chalkboard
For each student: copy of BLM *Cooking for a Small Army*, pen or pencil

Activity

A. Pre-Activity Preparation

1. Collect and clean three or four empty food containers from foods that are included on one of the grocery lists on the BLM *Cooking for a Small Army*.
2. Calculate the amount of that food you would need to buy for the number of students in your classroom based on the grocery list. You may wish to create grocery lists similar to the ones listed on the BLM so that each group has a unique meal to calculate.

B. Introduction

1. Tell students that they have been assigned to buy and cook the food for one meal at their summer camp.
2. Place the transparency on the overhead projector and cover all but the grocery list to which you will be referring.
3. Note that the grocery list gives the amount of food by weight that is needed for each person since the number of campers changes from year to year. Explain that students will be determining the amount of three or four food items to purchase for the number of students in the class before the students work on the activity in groups to find the amount of food needed for the camp.
4. Have students multiply the amount required for one person by the number of class members for the items of which you have containers.
5. When the correct calculations have been determined, show the containers to the students. Explain that the containers are not all measured by weight and it would be difficult to determine how much of each is needed for the containers that are measured by weight.

(continued)

EXTENDING
THE



ACTIVITY

Ask students if they have ever measured weight in grams and kilograms. Explain that there are 1,000 grams in a kilogram. Show the metric weight on the food containers you collected and discuss which nearby countries use metric measures and how it might affect your travel to those countries.

INCORPORATING



TECHNOLOGY

Challenge students to create a spreadsheet that uses formulas to convert ounces to pounds for use in the activity.

Standards Links
5.2.1, 5.2.4, 5.2.5

Activity (continued)

6. Tell students that, fortunately, there is a grocery store near the campground where everything is measured by bulk weight. It is called the By Pounds Only grocery store and, of course, everything must be measured in pounds only.
7. Tell students that there are 16 ounces in every pound. Write the equation on the chalkboard.
8. Find the number of pounds that will be needed for the food items that were calculated with the students assisting. Tell student that it is not necessary to find the exact number of pounds but that they may purchase whole pounds of food items for this activity.

C. Group Activity

1. Divide the classroom into groups of four and assign each group a meal to calculate from the BLM *Cooking for a Small Army* or meals that you have prepared.
2. Have students calculate the amount of food in pounds that they will need to purchase for their assigned meal.
3. Have students present their findings and discuss the calculations as a class.

Questions for Review

Basic Concepts and Processes

During the group activity, ask the following questions.

 How many ounces are in two pounds?

 How did you find your answer?

 How many pounds are there in 80 ounces?

 How did you find your answer?

Name: _____

COOKING FOR A SMALL ARMY

You have been assigned as a cook for one meal at your summer camp of 125 kids. It is your responsibility also to purchase all of the food for the meal you were assigned. No problem, right? When you look at the recipe, you notice that the ingredients listed are for ONE PERSON. Work together as a group to find the amount of food in pounds you will need to purchase for the meal your teacher assigns you.

Spaghetti Dinner Grocery List

(weight of ingredient per person)

- 4 ounces spaghetti
- 5 ounces spaghetti sauce
- $\frac{1}{2}$ ounce Parmesan cheese
- 1 ounce French bread
- $\frac{3}{4}$ ounce margarine
- 3 ounces salad mix
- $1\frac{1}{2}$ ounces salad dressing
- 10 ounces milk
- 6 ounces mint ice cream

Meatloaf Dinner Grocery List

(weight of ingredient per person)

- 3 ounces hamburger
- 2 ounces catsup
- $\frac{1}{2}$ ounce onion
- 6 ounces potatoes
- $\frac{3}{4}$ ounce margarine
- 5 ounces green beans
- 10 ounces milk
- 4 ounces oatmeal cookies

Chicken & Pasta Dinner Grocery List

(weight of ingredient per person)

- 3 ounces chicken
- $2\frac{1}{2}$ ounces noodles
- 2 ounces broth
- 5 ounces broccoli
- 1 ounce cheese sauce
- 4 ounces corn
- 10 ounces milk
- 3 ounces chocolate pudding

Pepperoni Pizza Dinner Grocery List

(weight of ingredient per person)

- $3\frac{1}{2}$ ounces cheese
- 1 ounce pepperoni
- 4 ounces flour
- $\frac{1}{4}$ ounce yeast
- 2 ounces pizza sauce
- 3 ounces salad mix
- $1\frac{1}{2}$ ounces salad dressing
- 10 ounces milk
- 5 ounces apple crisp

COOKING FOR A SMALL ARMY

Teacher Directions

Distribute one copy of the BLM *Cooking for a Small Army* to each student. Have students determine the amount of food they will need in pounds for the meal you have assigned to their group.

After students have made exact calculations, discuss how important it is to know the exact amount of pounds they would need. Discuss the factors that might determine the preciseness of the calculations (e.g., budget, whether there is a “leftover” night, etc). Have groups present their findings.

Answer Key

Spaghetti Dinner Conversions

32 pounds spaghetti
40 pounds spaghetti sauce
4 pounds Parmesan cheese
8 pounds French bread
6 pounds margarine
24 pounds salad mix
12 pounds salad dressing
79 pounds milk
47 pounds mint ice cream

Meatloaf Conversions

24 pounds hamburger
16 pounds catsup
4 pounds onion
47 pounds potatoes
6 pounds margarine
40 pounds green beans
79 pounds milk
32 pounds oatmeal cookies

Chicken & Pasta Dinner Conversions

24 pounds chicken
20 pounds noodles
16 pounds broth
40 pounds broccoli
8 pounds cheese sauce
32 pounds corn
79 pounds milk
24 pounds chocolate pudding

Pepperoni Pizza Dinner Conversions

28 pounds cheese
8 pounds pepperoni
32 pounds flour
2 pounds yeast
16 pounds pizza sauce
24 pounds salad mix
12 pounds salad dressing
79 pounds milk
40 pounds apple crisp