

Pi Tacular

Lesson 2: Students will determine the amount of each ingredient needed to make apple pie for the whole crew on the Battleship North Carolina. This lesson helps students with measurement, ratios and problems solving skills.

Objective:

Students will:

- Use problem solving skills, measuring techniques, and food preparation experience to practice various math concepts
- Determine minimum amount of ingredients required for each situation.

Standard Course of Study

1.01 Develop number sense for the real numbers

Materials

- Handout

Engage:

Have the students bring in one of their favorite recipes from home and have a class discussion on serving size. Talk about how many we might need to feed the whole class.

Explore:

Have students list what items they think are needed to make an apple pie in the 1940's.

Explain:

Today we are going to use the Apple Pie recipe to determine how much of each ingredient is need to serve the 141 officers, 2115 enlisted and 85 marines that were on the Battleship North Carolina.

Apple Pie recipe used during the 1940's serves 8 per pie

Pastry

2 ½ cups flour
2 Tablespoon sugar
5 Tablespoon shortening
¼ Teaspoon salt
8 Tablespoons water

Filling

8 Apples, peeled and sliced thinly
½ cup sugar
2 Tablespoons butter
2 Tablespoons brown sugar
¼ teaspoon nutmeg
½ teaspoon cinnamon

In groups of four go through the questions and discuss and determine a way to figure out how much of each ingredient is needed. Remember we know that each pie makes 8 servings.

1. If each pie makes 8 servings how many pies do we need to feed the whole crew? First how many crew members are there?

* This is a good time to talk about what happens when you get 292.625 pie, can we make .625 of a pie?

2. Now that we know how many pies we need what is our next step? Why?

3. How much of each item will we need to feed the:

	Flour	Shortening	Salt	Water	Apples	Sugar	Butter	Brown sugar	Nutmeg	Cinnamon
Whole Crew										
The Officers										
The Enlisted										
Marines										
The Officers each get two servings and the rest of the crew gets one serving										

The two blanks are for you to come up with two situations and answer those questions.

Extend:

If one pie takes 45 minutes to bake and we can bake 20 pies at the same time. How long will it take us to make all the pies needed for the whole crew to eat one serving?

Evaluate:

Have one student from each group explain an example they worked out to the whole class.

Have a class discussion on topic like:

- When would they have cooked these pies and where?
- How many crewmen worked in that area?
- List 5 important facts you learned today from the battleship?

*Things to remember

1 cup = 16 tablespoons

1 gallon = 4 quarts

1 quart = 4 cups

1 cup = 48 teaspoons