



Developed with Diane Foss, Retired FCS Educator

Measuring math muffin mastery

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NASAFACS 8

8.4 Demonstrate menu planning principles and techniques based on standardized recipes to meet customer needs.

Materials list

- *Baking Fundamentals* DVD (WA32530)
- 12-Cup Muffin Pan (WA24233)
- Measuring Set (WA33086)
- Stainless Steel 5-Cup Flour Sifter (WA10595)
- Paper Baking Cups, pkg. of 500 (WA09710)

Optional:

- 5-Minute Baking Activities (WA32532)

Introduction

This activity takes place after learning measurement equivalents and down-sizing or doubling a recipe. Use each kitchen lab group as a team. Have each team select one student from the team to act as a recorder. Orally ask 20 questions about measurement equivalents, ingredient cutting, and doubling. The recorder should write down the answers given by their team. Only allow 5 seconds for each answer. Exchange the answer sheets and correct them. The scores from this will be used for the next day's activity.

Objectives

Students will...

- Use math skills to cut a muffin recipe in half
- Use proper muffin method baking skills to prepare a specific muffin recipe

Day 1

Introduction (10 minutes)

Write the word "MUFFIN" on the board. Discuss the following questions with the students: What is a muffin? What kind is your favorite muffin? When do people eat muffins? What food group do muffins belong in? Are all muffins nutritious? Why or why not?

Activity (25 minutes)

View *Baking Fundamentals* DVD. Review the techniques from Chef Dave Christopherson.

Day 2 Prior to lesson: Prepare 6 "mystery bags" using the following ingredients for different muffin types (pumpkin and pie spice, carrot and raisins, blueberries, apple and cinnamon, cocoa and walnuts, cranberries and orange, banana, etc.). Be creative.

Introduction (10 minutes)

Set out the mystery bags. Each kitchen group will select a bag based on their quiz scores from the day before. The highest score picks first. Each group will then use the recipe resources available and find a recipe that uses the ingredients found in their bag.

Activity 1 (15 minutes)

Each lab group will rewrite their recipe after cutting the ingredients in half. Be sure their conversion math is correct.

Activity 2 (20 -25 minutes)

Fill out lab plan forms for the muffin variation lab (from the downloaded lesson plan).

Day 3

Activity (Entire period)

Prepare the muffins in lab. Serve so everyone can taste each type. As a class, decide on the three best recipes. These recipes will be made the next day in full batch volume.

Day 4

Activity (Entire period)

Make full batches of selected muffins. Once the kitchens are clean and the muffins are baking, discuss with the class which groups in the community might enjoy receiving the muffins as a "You Are Special" treat. They could suggest a nursing home, senior meal center, assisted living home, teachers, etc. Select one of the groups.

Day 5

Introduction (10 minutes)

Hand each student a treat (cookie or grapes) as they enter the room. Once class starts, ask them how they felt about receiving the treat. Discuss how a simple act like receiving a home-made muffin from high school students could get someone else's day off to a great start.

Activity (40 minutes)

Have students make "You Are Special" tags to put on the muffins. Wrap each muffin in colored plastic wrap and close with curling ribbon with tags attached. After school, have a couple class members help deliver the muffins to the chosen location. Hopefully the students will receive positive feedback they can share with the rest of the class the following day.

class favorites



Food Prepared: _____ Period _____ Unit # _____

Recipe: _____ Page _____ Book _____

Alterations to recipe, if any:

1.	2.	3.	4.
Chef	Cook	Assistant cook	Manager
Read the recipe Fill out the lab sheet Main cook for the day Clean range Supervise other cleaning jobs	Assemble equipment Assist chef Clean the table Wipe the counters/walls Put laundry in basket Check clean-up	Preheat oven Get supplies for recipe Set table Wash dishes Clean the sink Wipe off table	Dry the dishes Put dishes away Sweep the floor Extra duty
Cooking job	Cooking job	Cooking job	Cooking job

Ingredients + amounts needed to order for lab:

evaluation

Lab sheet planned, filled out correctly, and turn in before and after lab	10		
Lab work — techniques used, followed directions	5		
Cooperation — working together and each doing specific responsibilities	5		
Product evaluation	10		
Dishes washed, dried, and put away in correct place	5		
Range, table, sink, and counters clean	5		
Unit conduct, appropriate behavior, manners, and etiquette	5		
Unit cleaned up, checked and ready to go before the bell rings	5		
Total Points per Lab	50		

Unit Points Teacher Points