

**Mathematics Governor's Institute 2003  
Problem-in-a-Bag Template**

**Title of Project:**      *Let's Party!*

**Team Members:**      Melinda Gaus  
                                 Cindy Carr  
                                 Tammy Martin  
                                 Lorraine Shaffer

**Grade Level and/or Course:** Third Grade

**Concept(s) used:**      Problem solving  
                                 Computation  
                                 Money  
                                 Writing  
                                 Speaking

**PA Standard(s) Addressed:**

- 2.1.3.A** Counting using whole numbers (to 10,000) and by 2's, 3's, 5's, 10's, 25's and 100's.
- 2.1.3.E      Count, compare and make change using a collection of coins and one-dollar bills.
- 2.1.3.J      Estimate, approximate, round or use exact numbers as appropriate.
- 2.1.3.L      Demonstrate knowledge of basic facts in four basic operations.
  
- 2.2.3.A      Apply addition and subtraction in everyday situations using concrete objects.
- 2.2.3.B      Solve single-and double-digit addition and subtraction problems with regrouping in vertical form.
- 2.2.3.E      Use estimation skills to arrive at conclusions.
  
- 2.5.3.A      Use appropriate problem solving strategies.
- 2.5.3.B      Determine when sufficient information is present to solve a problem and explain how to solve a problem.
- 2.5.3.C      Select and use appropriate methods, materials and strategies to solve problems, including mental math, paper-and-pencil and concrete objects.

### **NCTM Standard(s) Addressed:**

- \*Understanding meanings of operations and how they relate to one another.
- \*Compute fluently and make reasonable estimates.
- \*Understanding numbers, ways of representing numbers, relationships among numbers and number systems.
- \*Organize and consolidate their mathematical thinking through communication.
- \*Communicate their mathematical thinking coherently and clearly to peers, teachers and others.
- \*Apply and adapt a variety of appropriate strategies to solve problems,

### **Introduction / applications:**

It's your birthday. This year your parents decided that you can plan your own party. You will be given \$100.00 to spend. You will need to plan for up to seven guests—and don't forget to include yourself when you purchase your items!!! You need to choose the items that you would like for your party. For your party to be complete, you must include:

- At least 1 item from the party supplies and decorations
- At least 1 item for refreshments
- At least 1 form of entertainment

**You must spend at least \$75.00 but no more than \$100.00.**

### **Question:**

What items would you choose for your party? Tell which items you would buy and list their cost on your planning sheet. Give the total amount of money you spent and the amount of money left over. Explain how you made your choices and what you did to make sure you spent the required amount of money.

### **Model:**

Discuss things that students like to have at a birthday party and what makes a party fun. Give students one possible scenario for a party using the items available from the list of choices.

### **Resources and Materials (estimated cost):**

Students will need:

- \*Planning sheet
- \*List of items with price tags (can be pictures of items or things to represent the items)
- \*Calculator

### **Procedures & Activities:**

- 1.) Discuss student's birthdays and some of their most memorable parties. Talk about what makes a party fun.
- 2.) Introduce to problem to the students.
- 3.) Give students a planning sheet to work on to record their choices for their party, the amounts of the items, the total cost and the amount they would have left.
- 4.) Once students have made their choices to create their party, and they have their planning sheet complete, they could use a calculator to check their work.
- 5.) Students could then present their parties to the class. This may be completed as a writing activity first-describing the party and what they would have at the party.
- 6.) Let the students sing happy birthday to themselves and then enjoy some birthday cake.

### **Answers / Rubric:**

\*See page 4

### **Accommodations/Adaptations**

**ESL:** Present items to the students and the term for each item as they are shown.  
Provide visuals for each item (3-D or 2-D).  
Give students the opportunity to hear other student's experiences from their birthdays.  
Model the problem  
Provide immediate feedback to the student's work  
Use a peer buddy.

### **Special Ed:**

Read the direction out loud.  
Model a possible answer for the students before they begin.  
Limit the amounts of money for each item to whole dollar amounts.  
Limit the items student will have to choose from for their party.  
Provide students with a calculator to use when they are making the choice of which items they will buy.  
Allow them to present their work orally.  
Use a peer buddy.

### **Enrichment:**

Students could be challenged to see if they could set up their party with the greatest amount of items for their money.  
Add time to each activity and ask students to plan a four hour party.  
Find the most economical way to have a party.

Name \_\_\_\_\_ Date \_\_\_\_\_

## Let's Party!!!!



**It's your birthday! This year your parents have decided that you can plan your own party. You have \$100.00 to spend. You will need to plan for up to 7 guests—and don't forget to include yourself when you purchase your items!!!! What items would you choose? For your party to be complete you must include:**

- \*At least one party supply or decoration**
- \*At least one item for your refreshment**
- \*At least one form of entertainment**

**You must spend at least \$75.00 but you have up to \$100.00. Use the planning form attached to plan your party. List the items you will buy and their cost. Tell the total cost of your party and the amount of money you will have left over. Explain how you made your choices and what you did to make sure you stayed within your budget.**



## Let's Party Rubric

Score	Spent \$75 to \$100	Included items from all 3 categories	Total amount spent and left over	Explanation
5	Yes	Yes	Yes	Yes
4	Yes	Yes	Minor calculation error in 1 or both parts	Yes
3	Yes	Yes	Minor calculation error or correct	Partial explanation
2	Yes	Yes	Minor calculation error or correct	No explanation
1	<b>Attempted</b>	<b>But</b>	<b>Incorrect</b>	<b>Response</b>
0	<b>No</b>	<b>Attempt</b>	<b>Off</b>	<b>Task</b>