The Ultimate Event Planner Challenge

Materials Needed

- Pencil and paper (or a notebook for the project)
- Graph paper (for the floor plan)
- Ruler
- Calculator (for checking work, not for initial calculations)
- "Event Supply Price List" (provided below)
- Optional: Colored pencils or markers for decorating the floor plan

Lesson Plan

1. **Introduction & Project Launch (15 minutes)**

   Teacher: "Today, you are not a student. You are a professional event planner! Your client has given you a budget of **$4,500** to plan an amazing party for **135 guests**. Your job is to make all the arrangements, stay within budget, and make sure everything is perfect. This will require some serious math skills to figure out costs and logistics!"

   The Challenge: Plan a complete event by creating a detailed budget and a floor plan. You must calculate the cost of rentals, food, and favors, and then figure out how to arrange everything for your guests.

2. **Guided Exploration: The Math Behind the Party (20 minutes)**

   Let's do a quick warm-up to review the skills you'll need. We'll solve a problem together.

   Sample Problem: "Your client wants to rent chairs. Each chair costs $12. How much will it cost to rent chairs for all 135 guests?"

   - Work through the multi-digit multiplication problem together: **135 x 12**.
     (Guide the student through the steps: 135 x 2, then 135 x 10, and add the results together. Answer: $1,620).

   Sample Problem 2: "You've ordered 1,080 dinner rolls. If each table seats 9 guests, how many rolls should be placed in a basket on each table?"

   - First, figure out how many tables you need. **135 guests / 9 guests per table**.
     (Work through this division. Answer: 15 tables).
   - Now, divide the rolls among the tables: **1,080 rolls / 15 tables**.
     (Guide the student through the long division process. Answer: 72 rolls per table).

   Teacher: "See? Every decision an event planner makes involves multiplication and division. Now you're ready to plan your own event!"

3. **Project Work Time: Plan Your Event! (45-60 minutes)**

   Hand the student the "Event Supply Price List" and their notebook. Guide them through the following steps, letting them do the calculations independently.

Event Supply Price List

<u>**Rentals:**</u>
Large Round Table (seats 9 people): $28 each
Chair: $12 each
Dance Floor Section (10ft x 10ft): $175 each

<u>**Catering (Price per person):**</u>
Pizza Buffet: $19 per person
Taco Bar: $22 per person
Fancy Chicken Dinner: $27 per person

<u>**Extras:**</u>
Party Favor Bags: $8 each
Bouquet of Balloons: $35 each
Professional DJ: $575 (flat fee)

Project Steps:

A. **Choose Your Theme & Food:** First, decide what kind of party this is (e.g., birthday, video game tournament, formal dance). Then, choose one catering option for all 135 guests.
B. **Calculate the Catering Cost (Multiplication):** Multiply the number of guests (135) by the cost per person for your chosen meal. This is your biggest expense!
C. **Calculate Rental Costs (Division & Multiplication):**
   - How many tables do you need for 135 guests if each table seats 9? (135 ÷ 9)
   - Now, calculate the total cost for that many tables. (Number of tables x $28)
   - Calculate the total cost for 135 chairs. (135 x $12)
D. **Choose Your Extras (Multiplication):**
   - Do you want a DJ? Add that cost.
   - Do you want party favors for every guest? Calculate the total cost. (135 x $8)
   - How many balloon bouquets do you want? Maybe one for every table? Or just a few for the entrance? Calculate the total cost.
E. **Create Your Budget:** On a clean sheet of paper, list every item and its calculated cost. Add them all up to find your grand total. Is it under the $4,500 budget? If not, what can you change or remove?
F. **Design the Floor Plan:** On the graph paper, draw the layout of the room. Where will you put the tables? The DJ? Do you want a dance floor? Make sure everything fits and looks great! Label everything clearly.

4. # Conclusion & Presentation (15 minutes)

Have the student present their final event plan to you as if you were the client.

Ask questions like:

- "Walk me through your budget. How did you calculate the cost of the food?"
- "Why did you decide to spend more on [X] and less on [Y]?"
- "How much money was left over from the $4,500 budget?"
- "Explain your floor plan. Why did you arrange the tables that way?"

Celebrate their hard work as a successful event planner!

Learning Objectives

- The student will apply multi-digit multiplication to solve real-world budget calculations.
- The student will apply multi-digit division (with a two-digit divisor) to solve logistical problems (e.g., number of tables needed).
- The student will create a comprehensive budget for a multi-step project, demonstrating the ability to organize and sum multiple calculations.
- The student will design a simple floor plan, connecting mathematical planning to a visual, creative output.

Common Core Standards Alignment

- **6.NS.B.2:** Fluently divide multi-digit numbers using the standard algorithm. (Applied when calculating tables needed).
- **5.NBT.B.5:** Fluently multiply multi-digit whole numbers using the standard algorithm. (Reinforced and applied throughout the budget calculation).

Assessment

- **Formative:** Observe and ask questions during the "Project Work Time." Check individual calculations for accuracy as the student works.
- **Summative:** The final "Event Plan" (budget sheet and floor plan) serves as the primary assessment. Evaluate it based on:
    1. **Mathematical Accuracy:** Are the multiplication and division calculations correct?
    2. **Project Completion:** Is the budget complete, logical, and under the $4,500 limit?
    3. **Application of Concepts:** Does the student's presentation show they understand how multiplication and division were used to make decisions?

Differentiation & Extension

- **For Extra Support:**
    - Break the project into smaller tasks over several days.
    - Provide a pre-made budget template with categories already listed.
    - Allow the use of a calculator for the initial calculations after they have attempted the long-hand method first.
- **For an Extra Challenge:**
    - Add a 7% sales tax to the total cost. The student must first find the total, then multiply it by 0.07 to find the tax, and add that to the total.
    - Introduce a constraint: "The room is only 60 feet by 40 feet. Each table has a diameter of 5 feet. Will all your tables and a dance floor fit? Justify with area calculations."
    - Ask them to calculate the price per guest of their party by dividing the total cost by 135.