MATH
Can Take You Places

LESSON 19
"Party Time"
by Elsie Sneed

CONCEPT AREA Problem Solving

GRADE LEVEL 4-6

TIME ALLOTMENT Two or three 60-minute sessions

LESSON OVERVIEW In this lesson, students will plan an end-of-the-school-year party at the Adolphus Hotel.

LESSON ACTIVITIES OVERVIEW Students will create a survey to solicit responses from the students in their grade to help them plan a party. Students will determine the favorite menu, music, theme and party favors, then develop a step-by-step party-planning guide.

LEARNING OBJECTIVES Students will be able to decide the problem-solving model that is appropriate for developing a successful and fun event.

STANDARDS (TEKS) **From the Texas Essential Knowledge and Skills for Math for grades 4-6:**

Grade 4-5
4.1A, B, C, D, G; 5.1A, B, C, D, G
Grade 6.
6.11A, B, C, D; 6.12A, B; 6.13A, B

MEDIA COMPONENTS Video: *Math Can Take You Places* #004 "Problem Solving"

MATERIALS

- Large poster or 1" graph paper
- Pencils
- Sticky notes 4" x 4"
- Markers
- Scissors
- Tape
- Graph paper 8 ½" x 11"

PREP FOR TEACHERS

- Prepare survey sheets
- Cue video

Note:
The concept of ***ratio*** will be covered during this lesson. Students may need to review the concept prior to beginning the activities, especially if your class includes students who are acquiring English as a second language (ESL).

INTRODUCTORY ACTIVITY: SETTING THE STAGE 1. Students will survey the class to find out what type of party theme, music, food and party favors they want most. Take suggestions from the students, and have them vote for the top three for each category. If other classes in the same grade are available, please make them a part of your survey.

2. As a class, use the one-inch graph paper to make a bar graph to display the results of the survey.

LEARNING ACTIVITIES

1. Say: "Now that we know what type of party the students want, there is a lot of planning to be done. We will divide into four different Party Committees to make the plans for the event. Each group will come up with a plan for providing each of our four items: party theme/decorations, music, food and party favors. As you are planning, make sure to keep in mind that we don't have a lot of money, so try to spend as little as possible."

2. Divide the students into four groups. Give them about 10 minutes to brainstorm what their very first steps should be. Share those answers aloud.

3. Once each group has some idea of where to start, let the students in the group begin to work to devise their plans. Provide catalogs or Internet access for students to use to be able to determine prices of items needed. Walk around and facilitate the planning among the groups. To make the problem solving more difficult, give each group a specific dollar amount as a spending limit. For example, the decorations group may have a budget of $50.

CULMINATING ACTIVITY

1. After students have completed their plans, discuss them briefly as a class.

2. Have groups discuss and list what steps they had to take to come up with their plans.

3. Say: "You now have a detailed list of steps that you took to plan what you are going to do for our class party. All of the groups have discussed what they've done to make sure the party will be a success. Imagine your little brother's class wants to plan a party, too. Let's come up with some general steps his class can follow from what we've learned."

4. List all of the ideas the students have, as they are suggested. Discuss what we could have done differently to make the planning go smoother, so we can offer the next group some helpful hints.

5. Have a party!

CROSS-CURRICULAR EXTENSIONS

Language Arts
Create a "Party Planning" book with the general steps in the front, the individual steps listed in different sections and the helpful hints throughout. Let students illustrate.

REAL-WORLD CONNECTIONS

Students assist in planning an actual party at school.

Watch the video, *Math Can Take You Places* #004 "Problem Solving" with Laura Stanforth. Discuss how she uses problem solving in her job. Brainstorm other ways problem solving is used in other familiar occupations.

ASSESSMENT

Party Time Quiz

STUDENT HANDOUTS

Party Survey sheet
Problem-solving sheets

Party Survey

Favorite Music	Number	Ratio
a.		
b.		
c.		
d.		

Party Survey

Favorite Foods	Number	Ratio
a.		
b.		
c.		
d.		

Party Survey

Favorite Theme	Number	Ratio
a.		
b.		
c.		
d.		

Party Survey

Favorite Transportation	Number	Ratio
a.		
b.		
c.		
d.		

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Name_____ Date_____

Party Time Quiz!

1. The students would like to have plenty of room to do their favorite dancing. The room is 50 ft. x 50 ft., but there are tables in a 20 ft. x 30 ft. area. The students need 1,500 square feet for dancing. Will there be enough room? Please explain your answer and show your work!

2. Chartering a bus for the party will cost $85.00 for the first three hours and $25.00 for each additional hour. The bus will arrive at the school at 6 p.m. to take the students to the Adolphus Hotel and will return to the school at 10:30 p.m. The party committee has allotted $140.00 to pay for the bus. Did it allow enough money to pay for the bus? Please explain your answer.

3. The principal would like to have an adult chaperone for every ten students attending the party. If 167 students will be attending the party, how many adult chaperones will the principal need? Please solve this problem two different ways.

4. The beverage for the party is a special mixture of juices and a fruit concentrate. One pint of the concentrate will make two gallons of the beverage. How many pints of the concentrate will be needed to make 20 gallons of the beverage?

Party Time Quiz
Answer Key

1. There will be enough room for dancing because the room is 2500 square feet. and the area for tables is 600 square feet, so 2500 – 600 = 1900 square feet available for dancing.

2. Yes. The bus trip will take 4 and ½ hours, so it will cost either $135 or $122.50, depending upon whether the bus company charges $25 for the last half-hour or $12.50 for it.

3. 17

4. 10 pints

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Encuesta de la Fiesta

Música Favorita	Número	Relación
a.		
b.		
c.		
d.		

Encuesta de la Fiesta

Comidas Favoritas	Número	Relación
a.		
b.		
c.		
d.		

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Encuesta de la Fiesta

Tema Favorito	Número	Proporción
a.		
b.		
c.		
d.		

Encuesta de la Fiesta

Transporte Favorito	Número	Relación
a.		
b.		
c.		
d.		

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Nombre_____ Fecha_____

¡Preguntas sobre la Fiesta!

1. A los estudiantes les gustaría tener mucho espacio para su baile favorito. El salón tiene 50 pies x 50 pies, pero las mesas ocupan un área de 20 pies x 30 pies. Los estudiantes necesitan 1,500 pies cuadrados para bailar. ¿Habrá suficiente espacio en el salón? Por favor explica tu respuesta y muestra tu trabajo.

2. El alquiler de un ómnibus cuesta $85.00 por las primeras tres horas y $25.00 por cada hora extra. El ómnibus llegará a la escuela a las 6 p.m. para llevar a los estudiantes al Hotel Adolphus y regresará a la escuela a las 10:30 p.m. El comité para la fiesta ha destinado $140.00 para pagar por el ómnibus. ¿Hay suficiente dinero para pagar por el ómnibus? Por favor explica tu respuesta.

3. Al director le gustaría tener un adulto por cada diez estudiantes que vayan a la fiesta. ¿Si 167 estudiantes van a ir a la fiesta, cuántos adultos chaperones necesita el director? Por favor resuelve este problema de dos maneras diferentes.

4. La bebida para la fiesta es una mezcla especial de jugos y un concentrado de fruta. Un octavo de galón del concentrado sirve para hacer dos galones de bebida. ¿Cuántos octavos de concentrado se necesitarán para hacer 20 galones de bebida?