ADVANCING STUDENT ACHIEVEMENT PROGRAM
ECHO MOUNTAIN SCHOOL, PHOENIX, AZ
SAMPLE ACTIVITIES

Shopping Math Academy – preK-K

Let's Go to the Store

Arizona State Math Strand: Number Sense

Objective(s): The student will

- make a model to represent a whole number.
- identify orally a whole number represented by a model.
- identify whole numbers through 20.
- identify coins.
- model addition through sums of 10 using manipulatives.

Materials:

- Poster with 10-15 common store-bought items with the prices clearly marked. No higher the 5 cents per item!
- Pennies
- Paper and pencils

Application to Real Life: Learning about money and addition in a store-type environment

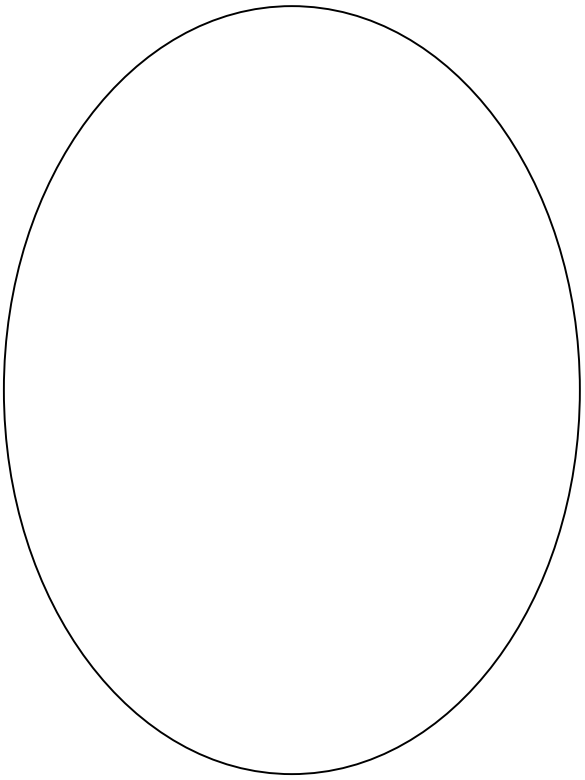
Procedures:

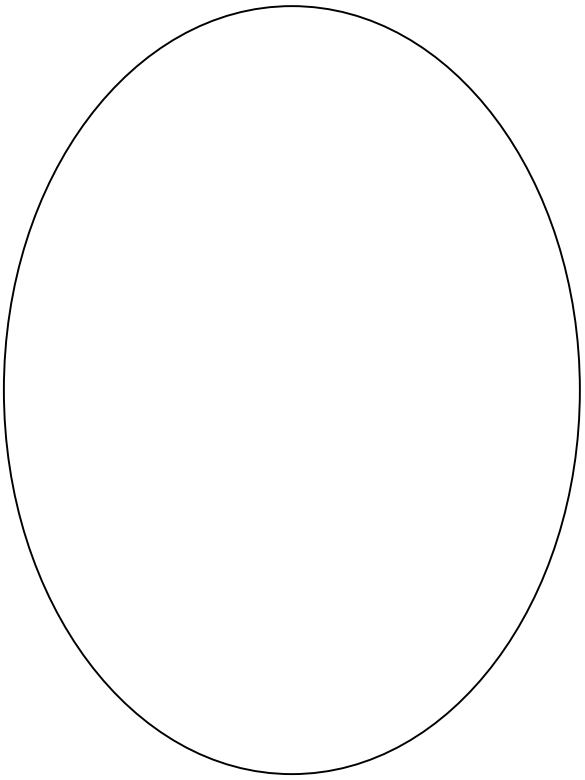
- The teacher will introduce the poster and go over the items show and the cost for each item.
- As the children are shown the poster they are to show the number of pennies or unifix cubes corresponding to the cost of each item.
- Students are then to choose 2 items and place the number of pennies for each item on the work mat. If possible, children will write the corresponding number sentence.
- Time permitting, we will do this several times.

Application to Real Life: Learning about money and addition in a store-type environment

Let's Go to the Store

Workmat





Let's Go to the Store

Student Recording Sheet

_____ + _____ = _____	_____ + _____ = _____
_____ + _____ = _____	_____ + _____ = _____
_____ + _____ = _____	_____ + _____ = _____

Shopping Math Academy – 1st Grade

Let's Go to the Store

Arizona State Math Strand: Number Sense and Operations

Objectives: Students will

- Identify money by name and value
- Identify the value of a collection of coins using the symbols ¢ and $

Materials:

- Math journals
- Pencils
- Small containers or cups
- Spoons
- Plastic bags
- Trail mix ingredients
- Coins (pennies, nickels, and dimes)

PRIOR TO THIS LESSON: Students have already made a list of the items they will "purchase" at the Trail Mix Store. They were able to choose items from a list of 10 (included M&M's, pretzels, marshmallows, raisins, etc.) Prices for one spoonful of each item ranged from 1¢ to 5¢. Each child received 30¢ in coins to spend at the store.

Procedures:

1. Students take their shopping list and their coin money to the "Trail Mix Store".
2. At the store, the students purchase the ingredients on their shopping lists. They put one spoonful of each item into their plastic bags.

Application to real life:

- Students learn how to purchase items required for a recipe.
- Students stay within a budget to purchase items.

Shopping Math Academy – 2nd Grade

A Quarter from the Tooth Fairy

Arizona State Math Strand: Number Sense and Operations

Objectives: Students will

- Count money through $5.00 using manipulatives and pictures of bills and coins.
- Identify the value of a collection of coins using the symbols ¢ and $ through $5.00

Materials:

- Math journals
- Pencils
- A Quarter from the Tooth Fairy (book from Scholastic)
- Money trays (make-up trays from Target)
- Race to a Dollar game sheets (one per student or pair of students)
- Dice
- Plastic coins

Procedures:

1. Read & discuss the literature connection A Quarter from the Tooth Fairy.
2. Model how to write money amounts. Write the value of a coin first, then draw a circle around it so the value is easily identifiable.
3. Explain how to play "Race to a Dollar"
    a. Students roll the die to determine how many pennies to put in the penny column on the game sheet.
    b. Continue to roll for pennies
    c. Students should trade for coins of larger value immediately whenever a trade for a higher-valued coin can be made (e.g., trade 5 pennies for a nickel, trade 2 nickels for a dime, trade 2 dimes and 1 nickel for a quarter, trade 4 quarters for a dollar).
    d. Once students have reached $1, they can play again for another dollar.
    e. If playing in pairs, students should take turns rolling the dice and trading coins.
4. Allow sufficient time for students to play "Race to a Dollar" (20 to 30 minutes).

Race to a Dollar

25¢ Quarters $.25	10¢ Dimes $.10	5¢ Nickels $.05	1¢ Pennies $.01

Shopping Math Academy – 3rd Grade

Let's Go to the Store

Arizona State Math Strand: Number Sense and Operations

Objective: Students will

- Count amounts of money through $20.00 using pictures or actual bills and coins.
- Order whole numbers and/or decimals from least to greatest or greatest to least.

Materials:

- Math journals
- Pencils
- Grocery store ads
- Sticky-notes
- Plastic coins and bills

Procedures:

1. Ask students to share what their favorite snack foods are.
2. In the grocery ads, have students locate seven snack foods they like to eat (you may have the students do this activity in groups of two, three, or four).
3. Have students write the items and prices on sticky-notes.
4. Have students order the prices in order from least to greatest or greatest to least.
5. Have students list the snack food and its price in their math journals in order from the cheapest to the most expensive snack.
6. Have groups mix up their sticky note prices and trade with another group.
7. Repeat the ordering and recording procedures.

Extension:

1. Ask students to choose their favorite snack food out of the seven they listed.
2. Instruct the students to design a table in their math journals to show the cost of one, two, three, four, and five of them.
3. How many could they buy with $2.00? How many could they buy with $10.00?

Application to real life:

- Students practice reading prices from grocery ads to determine cost of certain products as well as to determine the cost of varying quantities of the same product.

Shopping Math Academy – 4th Grade

Where Will We Shop for Thanksgiving Dinner?

Arizona State Math Strand: Number Sense and Operations

Objectives: Students will

- Use decimals in contextual situations
- Compare two decimals
- Add and subtract decimals
- Solve grade level appropriate problems using estimation
- Use estimation to verify the reasonableness of a calculation

Materials:

- Newspaper grocery ads
- Thanksgiving Shopping recording sheet for each student
- Calculators
- Pencils
- Math Academy journal

Procedures:

1. Students will look through grocery store ads from 4 different stores for 6 different food items (listed on recording sheet).
2. Students will write prices for each item on the Thanksgiving Shopping worksheet.
3. Students will calculate the total cost of the 6 items at each store.
4. Students then compare prices to determine which store has the best prices for the holiday meal.

Application to real life:

- Students search through grocery store ads to find item pricing.
- Students calculate the cost of multiple food items.

Thanksgiving Shopping

With your group, find the items listed in each of the four grocery ads. Write down the price for each store.

Item	Prices			
	Albertson's	Bashas'	Fry's	Safeway
Turkey				
Ocean Spray Cranberry Sauce				
Stove Top Stuffing				
Chicken Broth				
Pumpkin Pie				
Cool Whip				
TOTAL COST (all 6 items)				

1. Circle the cheapest price for each item. (Check when completed) _____
2. Find the total cost for each store. (Check when completed) _____
3. Use a calculator to check your work. (Check when completed) _____
4. Which store was the most expensive? _____
5. Which store was the cheapest? _____

Shopping Math Academy – 5^{5h} Grade

Holiday Shopping on a Budget

Arizona State Math Strand: Number Sense and Operations

Objectives: Students will

- Use decimals in contextual situations
- Compare two decimals
- Add and subtract decimals
- Solve grade level appropriate problems using estimation
- Use estimation to verify the reasonableness of a calculation
- Round to estimate quantities

Materials

- Catalogs from various stores
- Holiday Shopping on a Budget worksheet for each student
- Calculators
- Pencils
- Math Academy journal

Procedures:

1. Students will be given a budget of $500 to shop for their families.
2. They will go through catalogs and select items that will keep them within $5.00 of their budget without going over.
3. Once finished, students will create a holiday wish list and estimate the dollar amount needed.
4. They will then locate these items in the catalogs and calculate the difference between their estimates and the actual costs.

Application to real life:

- Students will work within a budget.
- Students search through retail catalogs to find item pricing.
- Students calculate the cost of multiple items.

Shopping Math Academy – 6th Grade

Catalog Bonanza

Arizona State Math Strand : Number Sense and Operations

Objectives: Students will

- Solve problems using decimals
- Use decimals in contextual situations
- Add and subtract decimals
- Solve grade level appropriate problems using estimation
- Use estimation to verify the reasonableness of a calculation
- Round to estimate quantities in contextual situations

Materials:

- Retail catalogs
- Mail order forms for each student
- Calculators
- Dice (30-sided and 6-sided)
- Pencils
- Math Academy journals

Procedures:

1. Students will listen to requirements of the assignment and learn how much money falls within their budget.
2. Budgets are determined with a random roll of a 30-sided die multiplied by $10.00.
3. The total number of people to purchase for is based on the roll of a 6-sided die.
4. Students will look through the catalogs to determine what to purchase.
5. Students will record their purchases for each catalog on a separate mail order form. They should keep track of all their purchases in their journals.
6. Students need to reflect on why they made their purchase decisions and why.
7. Students should check their computations with calculators.

Application to real life:

- Students will shop within a budget.
- Students will use a catalog to purchase items.
- Students use estimation skills to keep a running total of items to be purchased.
- Students learn to avoid over-spending.