

Archived Information

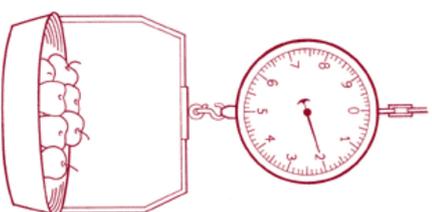
Helping Your Child Learn Math - June 1999

Activities

Math at the Grocery Store

The grocery store is one of the best examples of a place where math is real. It's a great place for practicing measurement, estimation, and quantity. Since trips to the store usually affect everyone in the family, the following activities include various levels of difficulty within the activity.

Allowing your children to participate in weighing, counting, and figuring price per unit versus price per pound will help improve their ability to estimate and predict amounts with accuracy.



Get Ready

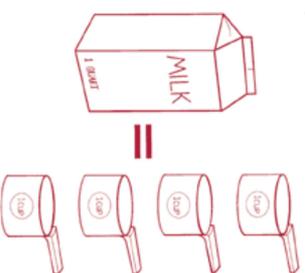
Grades K-2

What you'll need

Grocery store coupons and paper

What to do

1. Involve the family in making a shopping list. Mark checks or tallies next to each item to indicate the number needed. This helps children learn to collect data.
2. Involve the children in predicting how much milk or juice will be needed for a week. You might decide to estimate by cups, explaining that 4 cups are equal to a quart and 4 quarts are equal to a gallon. Also, try estimating by liters. How does a liter compare to a gallon?
3. Choose coupons that match the items on the grocery list. Discuss how much money will be saved on various items by using coupons.



Parent Pointer

Preparing a shopping list from advertised prices can help children with mental math and estimation.

Weighing In

Grades 3-5

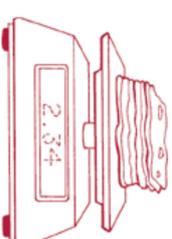
What you'll need

A grocery scale or your scale at home

What to do

1. Help your child examine the scale in the grocery store or the one you have at home. Explain that pounds are divided into smaller parts called ounces and 16 ounces equal a pound.
2. Gather the produce you are purchasing, and estimate the weight of each item before weighing it. If you need 1 pound of grapes, ask your child to place the first bunch of grapes on the weighing scale, and then estimate how many more or fewer grapes are needed to make exactly 1 pound.
3. Let your child hold an item in each hand and guess which item weighs more. Then use the scale to check.
4. Ask questions to encourage thinking about measurement and estimation. You might want to ask your child: How much do you think 6 apples will weigh? More than a pound, less than a pound, or equal to a pound? How much do the apples really weigh? Do they weigh more or less than you estimated? Will 6 potatoes weigh more or less than the apples? How much do potatoes cost per pound? If they cost 10 cents per pound, what is the total cost?
5. Try weighing items using the metric system. How many grams does an apple weigh? How many kilograms does a sack of potatoes weigh? How does a kilogram compare to a pound?

Let your child experiment with the store scale by weighing different products.



Parent Pointer

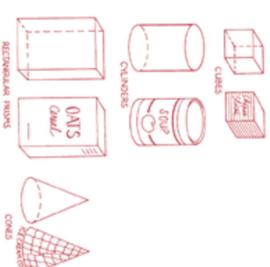
There are many opportunities to increase estimation and measurement skills by weighing objects in the produce section of the grocery store.

Get into Shapes

Grades 2-4

What to do

1. Show your child the pictures of the shapes on this page (cone, cylinder, square boxes, and rectangular prism) before going to the store. This will help your child identify them when you get to the store.
2. At the store, ask your child questions to generate interest in the shapes: Which items are sold? Which are flat? Which shapes have flat sides? Which have circles for faces? Which have rectangles? Do any have points at the top?
3. Point out shapes and talk about their qualities and their use in daily life. Look to see what shapes stack easily. Why do they? Try to find some cones. How many can you find? Look for stacks that look like a pyramid. Determine which solids take up a lot of space and which ones stack well. Discuss why space is important to the grocer and why the grocer



cares about what stacks well. (More space allows for more products to be stored.)

Parent Pointer

Recognizing the different shapes that food is packaged in, such as square boxes, rectangular boxes, cones, and cylinders, will help children connect math and volume principles to the real world.

Check It Out

Grades 2-3

What you'll need
Money

What to do

1. Have your child estimate the total price of items in a shopping cart. An easy way to estimate totals is to assign an average price to each item. If you have 10 items and the average price for each item is \$2, the total price estimate would be about \$20.
2. Using the estimated total, ask your child: If I have 10 one-dollar bills, how many ones will I have to give the clerk? If I have a 20-dollar bill, how much change should I receive? If I get coins back, what coins will I get?
3. At the checkout counter, what is the actual cost? How does this compare to your estimate? When you pay for the items, will you get change back?
4. Count the change with your child to make sure the change is correct.



Parent Pointer

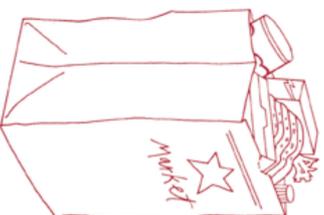
Help your child use mental math by estimating cost. Then have your child participate in the checkout process where the total is added up, money is exchanged, and change is returned.

It's in the Bag

Grades K-4

What to do

1. After getting home from grocery shopping, have your child guess how many objects there are in a bag. Ask: Is it full? Could it hold more? Could it tear if you put more in it? Are there more things in another bag of the same size? Why do some bags hold more or less than others?
2. Put several 1-pound items in a bag. Let your child pick it up. Estimate the weight and then count the items. Was your estimate close or not?



3. Estimate the weight of the bag of groceries. Does it weigh 5 pounds, 10 pounds, or more? How can you check your estimate? Now, compare one bag to another. Which is lighter or heavier? Why?

Parent Pointer

Explore ways to estimate volume and weight by looking in the bag and feeling how much it weighs. Compare it to a known weight (such as a 5-pound bag of sugar).

Put It Away

Grades K-1

What you'll need
Paper, pencil, ruler, and computer

What to do

1. After getting home from grocery shopping, find one characteristic that is the same for some of the products. For example, some are boxes and some are cans.
2. Put together all the items that have the same characteristic.
3. Find another way to group these items.
4. Continue sorting, finding as many different ways to group the items as you can.
5. Play "Guess My Rule." In this game, you sort the items and ask your child to guess your rule for sorting them. Then, reverse roles and let your child sort the items so that you can guess their rule.
6. Using paper, pencil, ruler, and computer, make a chart of how many items are in each category.



Parent Pointer

Putting away groceries helps children develop classifying and reasoning skills and the ability to examine data or information.

[Math in the Home](#) | [Math on the Go](#)

