## Wish list

## Materials

- A mail-order catalog or advertising supplement likely to contain items of interest to your child. If your child's school sends home book club order forms, you can use those.
- Pencil and paper
- Stick-on notes (optional)
"There are so many great things in this catalog. If I had $\$ 50$ to spend, what would I buy?"

Mail-order catalogs and advertising supplements can be a temptation, a convenience, and an annoyance. They can also be an opportunity for lots of math! In this activity, children pretend they have a certain amount of money to spend. They use a catalog or an advertising supplement to make a "wish list" of items they can buy for their spending limit. As they make their choices, they practice addition, subtraction, and estimation with dollars and cents. They also learn about working within a budget.

This activity can be a great way to keep children occupied-and doing math-on long trips, at the kitchen table while you're making dinner, or on rainy days.

## 2. Make a wish list

Your child can record items and prices, or use stick-on notes to mark pages that have items of interest.

If your child needs ideas for getting started, suggest one of these first steps:

Start with one item. Subtract the cost of that item from the spending limit. How much is left to spend?

Start with two items and find out how much they cost together. Are you past the spending limit yet? If so, exchange at least one item for a cheaper one. If not, choose another item.

Round any "dollars and cents" prices to the nearest dollar. If an item is $\$ 5.95$, call it $\$ 6$. If it's $\$ 5.25$, call it $\$ 5$. Use the wholedollar prices to do some quick calculations or estimates. Once you get close to your spending limit, figure out the exact amounts to make sure you're not over.

Some children will try several (or many) combinations of items before they settle on a list that is within the spending limit.

If some of the calculations are too challenging, talk through how you would do them yourself. Next time, choose a lower spending limit.

## 3. Discuss everyone's choices

Listen to your children tell how they made their choices. If they don't mention any calculations, encourage them to tell you about this, too.
"You chose some great things! How did you keep track of all the prices to make sure you stayed under your limit? ... Did you come up with any combinations of things you wanted that were over your limit? ... So, then what did you do?"

If you notice errors in calculating, encourage your children to explain their thinking further.

"So, you added 18 and 14, and got 31. How did you get that?"

Children may notice and correct mistakes as they talk about how they got their answers. If not, help them work through their own approach again. For example, suppose your child says, "First I added 10 to 18 , that's 28 . Then I added 4 more- 28,29 , 30,31 ." Let your child know what was successful, then talk through the trouble spot.
"That's a good way to do it-tens first, then ones. So you have 28 and you want to add 4. What's 28 and 1 more? ... OK, 29. What's 28 and 2 more? ... 3 more? ... 4 more?"

## When you repeat this activity

Use different catalogs and advertising supplements, and vary the spending limits. Ask your children to explain some of the calculations they are doing as they make their wish lists, and encourage them to check their work by doing the calculations in a different way.

## Variations

## Use a calculator (ages 7-11)

Many adults use calculators when doing routine calculations at home and at work, so it's important that children have a chance to learn what calculators can do. As children are making their choices and checking to see if they've reached the limit, ask them to tell you how they're using the calculator.
"So, what did you enter? ... Did you add or subtract? ... That number on the calculator display-what's that the total of?"

Let children know that when they use calculators, it's important to make sure they've entered correct calculations. Encourage them to check their results with a mental estimate.

What do we save? (ages 7-11)
Sometimes mail-order companies put out
"sale" catalogs in which some or all of the items are reduced in price. Usually, both the original price and the sale price are given. Ask your children to decide what they would buy for a given spending limit, and also to calculate how much they would save from the original prices.
"So the total for the bicycle, helmet, and sneakers comes out to $\$ 304$. Is that about right? Let's see—it's almost $\$ 200$ for the bike, about \$40 for the helmet, and just over $\$ 50$ for the sneakers. Does that come out close to \$300?"


