3

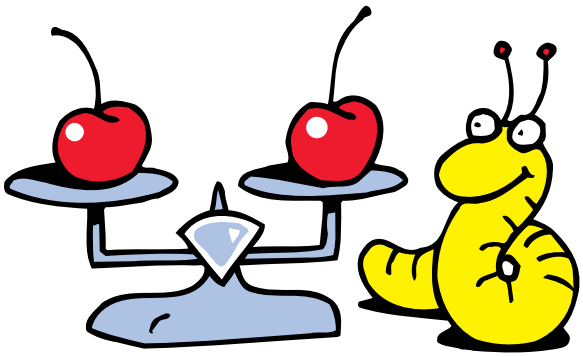
What's fair?

Materials

Between about 5 and 50 "countable" foods, like pancakes, crackers, or strawberries

"Cherries—yum! I want the exact same amount as Tulani!"

When it comes to favorite foods, everyone wants a "fair share." When your children ask you to "make it fair," ask them to figure out how to divide up the food so everyone gets the same amount. This involves using division, as well as counting, adding, subtracting, and multiplying—and sometimes even working with fractions.



1. Count to find how much food

Put the food to be shared on a plate so everyone can see it. If there are more than a few items, ask your children to make an estimate first:

"About how many cherries do you think we have? Let's count and see."

If necessary, help young children with the counting as the numbers get large.

2. Divide the total into equal parts

Remind your children of the number of items and the number of people to share them.

"So, there are 17 cherries and 3 of us. How many cherries should we give each person?"

For ages 5–7

Young children learn about division by working with actual things. Try asking them to deal out the food and count how many each person gets.

For ages 7–11

If your children need help, work with them in one of these ways.

Add up. *"What if we gave everyone 2 cherries? How many would that be? … What if we gave everyone 3 cherries? … 5 cherries? How many would be left over?"*

Subtract. *"If everyone gets 1 cherry, how many are left? … What if everyone gets 2 cherries? … 5 cherries? Can we give out 6 cherries to everyone?"*

Use multiplication or division facts. *"What if there were 15 cherries, how could you divide them into 3 equal shares? What's 15 ÷ 3? … Yes, everyone would get 5. That takes care of 15 of the cherries. How many are left over?"*

3. Decide what to do with the extras (optional)

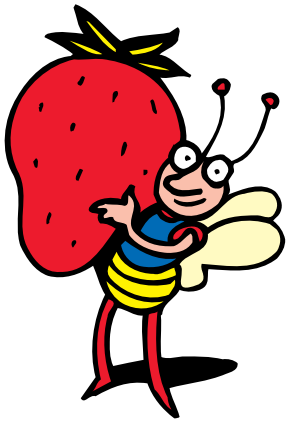
If there are any extras, discuss what to do with them: leave them for someone else? Break them into pieces and share the pieces?

If it makes sense to divide the extras into equal parts, you can do this as a way to bring up fractions. No one wants to divide that extra cherry into three equal parts, but you could easily divide other kinds of foods.

"How can we divide these two brownies up among the three of us?"

"There are seven pancakes left. How can we divide them up among the five of us?"

If your children aren't sure how to start, suggest dividing each extra item into equal parts for everyone. For example, to share two brownies among three people, cut each brownie into three equal parts, or thirds. How many of these thirds are there? How can they be shared?



4. Distribute the food

(This step won't be necessary if children dealt out the food as part of step 2.)

Ask your children to count out the actual items for each person. This is an ideal job for a young child if the numbers are small. If it's necessary, help them cut or break up the extras into equal parts. Before everyone eats, make sure there's agreement that the distribution of food is fair. If there's any disagreement, talk with them about what they think would be fair and why.

When you repeat this activity

Try different numbers of food items, and different numbers of people sharing. For more challenge, use larger amounts, and amounts that give you "extras." Encourage children to explain how they got their answers, and to check their work by finding the solution in a different way.

Variations

Working together (ages 5–11)

If there are two or more children, you can divide up this activity so each child is doing a different part: counting the items to be shared; checking the count; figuring out how many each person gets; and then counting out the equal shares.

Equal shares for some (ages 5-11)

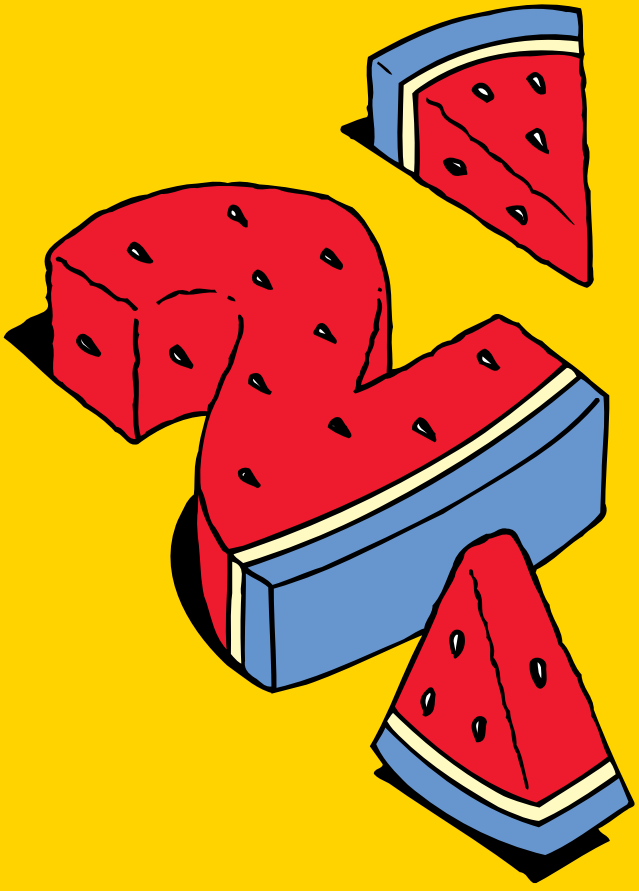
Sometimes, people don't want the exact same amount. A younger child might not eat quite as much, or someone might not be very hungry.

Tell your children how much one or two people get, and ask them to figure out how to share the rest fairly among everyone else.

"There are 12 pancakes and 5 of us. Malia eats just one and Dad only wants two. How many will each of the rest of us get?"

Challenge older children with clues about uneven sharing.

"We have 10 crackers. Let's share them so that I get 2 less than you do. How many does each of us get?"

"There are 6 strawberries left. What if I get half as many as you do? How many will we each get?"

These problems can be difficult. Try one when there are just a small number of things to share.