Halloween candy math

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Halloween candy makes a ready-made math kit. Kindergartners guess, count by tens and sort; 2nd and 3rd graders tally, graph, share fairly and shop with a price menu; 4th and 5th graders find fractions of the bag, the mean, median and mode, and work to a budget. Print a sort mat, a graph and an answer key.

How to use this page

Every activity works two ways: with a real bag on the kitchen table, or with the made-up bag below, which is what the problems and the answer key use. In class, the made-up bag means every child does the same math, whether or not they went out. Pick your grade band, then print what you need: the sort mat, the blank bar graph, the fractions sheet and the answer key.

The made-up bag

24 pieces, picked so every fraction of it simplifies nicely. The prices are the candy shop's, for the money problems.

- Candy: Mini chocolate bars · How many: 9 · Shop price: 25¢
- Candy: Fruity chews · How many: 6 · Shop price: 5¢
- Candy: Gummy packs · How many: 4 · Shop price: 20¢
- Candy: Lollipops · How many: 3 · Shop price: 10¢
- Candy: Hard candies · How many: 2 · Shop price: 5¢

Kindergarten and 1st grade: count, sort and compare

Guess, then count by tens

1. Look at the pile and guess how many. Write the guess down, or say it out loud so a grown-up can.
2. Count the candy into piles of ten. An egg box cut down to ten cups, or a ten-frame drawn on paper, keeps each pile honest.
3. Count the piles by tens, 10, 20, 30, then count on the ones left over.
4. Was the guess too many or too few?

Try it on the made-up bag:

- 3 piles of ten and 4 left over. How many pieces? Answer: 34
- 5 piles of ten and none left over. How many pieces? Answer: 50
- Your guess was 40 and you counted 34. Too many or too few, and by how many? Answer: Too many, by 6

Sort and tally

1. Sort the candy onto the sort mat: chocolate, fruity, chewy, hard candy, and not candy at all.
2. Count each pile and make a tally mark for every piece. Every fifth mark crosses the four before it, so you can count the bundles by fives.
3. Which pile is biggest? Which is smallest? Are any two the same?

Try it on the made-up bag:

- A bundle of five tally marks and 2 more marks. How many pieces? Answer: 7
- The made-up bag has 9 mini chocolate bars, 6 fruity chews, 4 gummy packs, 3 lollipops and 2 hard candies. Which pile is biggest? Answer: Mini chocolate bars (9)
- How do you tally 9 pieces? Answer: 1 bundle of five and 4 more

Print the sort mat for this one (the buttons are at the top of the page).

More or fewer?

1. Take two piles and line them up side by side, one piece across from one piece.
2. The pile with pieces left over, with no partner, has more. Count the ones with no partner: that's how many more.

Try it on the made-up bag:

- 9 chocolate bars and 6 fruity chews. Which has more, and how many more? Answer: Chocolate, 3 more
- 3 lollipops and 4 gummy packs. Which has fewer? Answer: Lollipops

2nd and 3rd grade: graph, share and shop

Tally it, then graph it

1. Sort and tally the bag (the sort mat helps).
2. On the blank graph, write a kind of candy under each column and color one square for each piece. Give the graph a title.
3. Ask questions of your graph: how many more, how many fewer, how many in all.

Try it on the made-up bag:

- In the made-up bag, how many more chocolate bars than lollipops? Answer: 6
- How many pieces in the made-up bag altogether? Answer: 24
- How many pieces are not chocolate? Answer: 15

Print the blank bar graph for this one (the buttons are at the top of the page).

Fair shares

1. Count out 24 pieces. Deal them one at a time, round and round, between 2 people, then 3, then 4, and so on.
2. Write how many each person gets, and how many are left over when the dealing can't go round again.
3. Which numbers of people share it with none left over?

- Share between: 2 people · Each gets: 12 · Left over: None
- Share between: 3 people · Each gets: 8 · Left over: None
- Share between: 4 people · Each gets: 6 · Left over: None
- Share between: 5 people · Each gets: 4 · Left over: 4
- Share between: 6 people · Each gets: 4 · Left over: None
- Share between: 7 people · Each gets: 3 · Left over: 3
- Share between: 8 people · Each gets: 3 · Left over: None

Try it on the made-up bag:

- Share 24 pieces between 3 people. How many each? Any left over? Answer: 8 each, none left over
- Share 24 pieces between 5 people. How many each? Any left over? Answer: 4 each, 4 left over
- Share 24 pieces between 8 people. How many each? Any left over? Answer: 3 each, none left over

Bags of the same

1. Make little bags (or cups) with the same number in each, say 4 bags of 5.
2. Count them all by fives, then write it as a times fact: 4 × 5 = 20.
3. Try it the other way round: 5 bags of 4. Is it the same?

Try it on the made-up bag:

- 4 bags with 5 pieces in each. How many pieces? Answer: 20
- 3 bags with 6 pieces in each. How many pieces? Answer: 18

The candy shop

1. Open a pretend shop with the price menu. One person is the shopkeeper and one is the shopper.
2. Pay with real coins, or with paper ones. The shopkeeper counts on to give change.

Try it on the made-up bag:

- A lollipop and a gummy pack. How much? Answer: 30¢
- Two mini chocolate bars. How much? Answer: 50¢
- You have 50¢ and buy a gummy pack. How much change? Answer: 30¢

4th and 5th grade: fractions, averages and a budget

Fraction of the bag

1. Count the whole bag. That number is the bottom of every fraction (the denominator).
2. Count each kind. That's the top (the numerator). Write each kind as a fraction of the bag, then simplify it.
3. Put the fractions in order from smallest to biggest. Do they add up to one whole?

Try it on the made-up bag:

- What fraction of the made-up bag is mini chocolate bars? Simplify it. Answer: 9/24 = 3/8
- What fraction of the made-up bag is fruity chews? Simplify it. Answer: 6/24 = 1/4
- What fraction of the made-up bag is gummy packs? Simplify it. Answer: 4/24 = 1/6
- What fraction is chocolate or fruity? Answer: 15/24 = 5/8
- Put the kinds in order, smallest fraction first. Answer: 1/12, 1/8, 1/6, 1/4, 3/8

Print the fractions sheet for this one (the buttons are at the top of the page).

Whose street was best?

1. Brothers, sisters or friends each count their bag.
2. Mean: add them all up and share the total out equally (divide by how many bags).
3. Median: line the counts up from smallest to biggest and find the middle one. Mode: the count that comes up most. Range: the biggest take away the smallest.
4. Which tells you more about a typical bag here, the mean or the median?

Try it on the made-up bag:

- Five friends' bags: Mo 17, Ivy 22, Sam 30, Lu 22 and Kai 29. What's the mean? Answer: 120 ÷ 5 = 24
- What's the median? Answer: 22 (in order: 17, 22, 22, 29, 30)
- What's the mode, and the range? Answer: Mode 22; range 13

A dollar at the candy shop

1. Use the price menu. Each shopper has $1.00 to spend.
2. Plan a shopping list first, add it up, then work out the change.
3. Challenge: what's the most pieces you can buy for exactly $1.00?

Try it on the made-up bag:

- You have $1.00. Buy 2 mini chocolate bars and 3 fruity chews. How much change? Answer: 65¢ spent, 35¢ change
- With $1.00 you buy one popcorn ball. How many lollipops can you buy with the rest? Answer: 5
- What would the whole made-up bag cost at the shop's prices? Answer: 9 × 25¢ + 6 × 5¢

+ 4 × 20¢ + 3 × 10¢ + 2 × 5¢ = $3.75

The candy shop price menu

For the money problems in 2nd to 5th grade. Pretend prices in US cents; real coins make it better.

- Item: Mini chocolate bar · Price: 25¢
- Item: Fruity chew · Price: 5¢
- Item: Gummy pack · Price: 20¢
- Item: Lollipop · Price: 10¢
- Item: Hard candy · Price: 5¢
- Item: Popcorn ball · Price: 50¢

The printables

- Sort mat. Five boxes to sort the candy onto, with a tally line and a total under each.
- Blank bar graph. Six columns up to 20, a line for the title and a line under each column for the kind.
- Fractions sheet. Write each kind in your own bag as a fraction, then the made-up bag's questions.
- Answer key. Every answer for the made-up bag on this page, by grade band.

Each prints on one page, Letter or A4, in black and white. The print buttons are at the top of this page.

For teachers

- Not every child went trick-or-treating, and some families don't do Halloween. The made-up bag on this page lets everyone do the same math, with paper candy or counters instead of real candy.
- If real candy comes to school, keep it wrapped and don't eat it in class: allergies, and the little ones near hard candy. It goes back in the bag at the end.
- Counters, cubes or paper cut-outs work just as well as candy for every activity here.

Do it with your real bag

Count the Candy is a printable sheet of candy sums at four sizes, from counting to 10 up to times tables.

More from Peabody

- What to do with leftover Halloween candy: where to donate it, what to make, and how to keep it.
- Candy science experiments: twelve experiments to try with the rest of the bag.

- Thanksgiving classroom games: pie fractions, a dinner budget and elapsed time for later in the month.
- Math worksheets: free printable math sheets by grade.
- Halloween HQ: every Halloween thing at Peabody, still open.

Questions grown-ups ask

What math can you do with Halloween candy?

Estimating and counting by tens, sorting and tallying, bar graphs, more and fewer, fair shares and division with leftovers, fractions of the bag, mean, median and mode, and money math with a pretend candy shop. Each one works with a real bag or a picture of one.

What's a good Halloween candy math activity for kindergarten?

Guess how many pieces are in a small pile, then count them into piles of ten and count the piles by tens. Then sort them on a mat and say which pile has more.

How do you teach fractions with Halloween candy?

Count the whole bag: that's the denominator. Count one kind, like chocolate: that's the numerator. Nine chocolate bars in a bag of 24 is 9/24, which simplifies to 3/8. Then compare and order the fractions for each kind.

Can I use this in class if not every child has candy?

Yes. Every problem on this page uses one made-up bag of 24 pieces, and the sort mat and graph work with counters or paper candy. The answer key covers the made-up bag.

Does this page cost anything?

No. Peabody is free through the end of 2027, with no sign-up and no ads. The printables are free to copy for a class.

Free at peabody.kids/holidays/halloween/candy-math