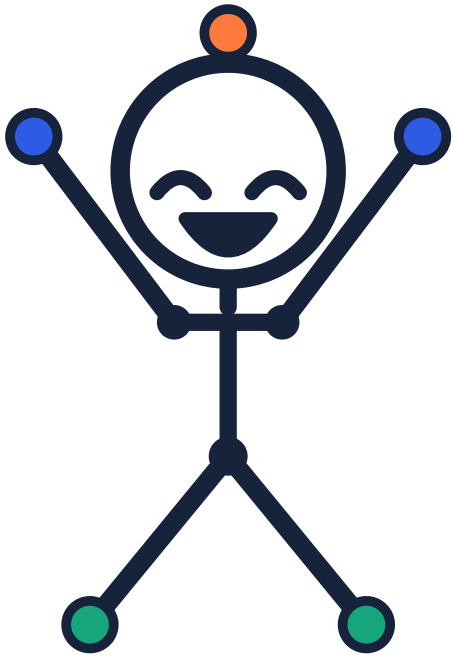
Young Innovators
FOR CHANGE
innovateyouth.org

A FULL-YEAR FINANCIAL LITERACY PROGRAM · GRADE 4

The Planning Year

36 weekly assignments. Money to the cent, a plan you wrote, and the record that tells you whether it was any good.



This book belongs to

_____

How long my plan runs _____

It starts on _____

Teacher _____

School year _____

Free to print, copy and use. No license, no account, no cost to any student or school.

START HERE HOW THIS BOOK WORKS

Decide it before.

Two pages a week, front and back. About thirty-five minutes.

The shape of a week

Page 1 teaches one idea and gives you something to do with it. **Page 2** is practice, two questions to talk over, and a harder challenge. No computer needed.

Weeks 1 to 12 are money to the cent and then the first plan. Weeks 13 to 24 are about keeping it, which means a second column saying what really happened. Weeks 25 to 36 are the money coming in, the cost nobody planned for, and a plan that runs in months.

The boxes on the page

IN CLASS	The Grade 4 standard your class is most likely on that week. This book sits beside your math lesson, not against it.
MONEY WARM-UP	Two minutes of arithmetic with money in it. Decimals to the cent, multiplying and dividing, which is what 4.NF, 4.NBT and 4.MD are for.
WORDS TO KEEP	One or two words pinned down properly. Adults use these loosely; you will not have to.
PLAN BOOK	The one thing you build all year. 20 pages by week 36, from the practice money in week 13 or your own.
TALK ABOUT IT	Two questions for someone at home or at school.
STUCK? TRY THIS	A way in when the page stops making sense.
CHALLENGE ZONE	Harder, and usually open. For whoever finishes early.

Three things this book does not do

Nothing is sold. No product, no customer, no market day. That is The Venture Year, also Grade 4 and a different book.

Nobody is asked what anything costs at their house. Every amount is printed on the page, including the practice money in week 13, or is your own if you choose, and nobody has to say which.

No plan is graded right or wrong. What can be graded is whether it adds up.

WEEK	TITLE	STRAND	WHAT IT SITS BESIDE IN CLASS
TRIMESTER 1 · WEEKS 1–12 · TO THE CENT, AND THE FIRST PLAN			
1	**A Dollar Has a Hundred Parts**	Cents	Decimal notation for fractions (4.NF.6)
2	**Which Is More?**	Cents	Comparing decimals to hundredths (4.NF.7)
3	**Adding to the Cent**	Cents	Money problems with decimals (4.MD.2)
4	**Taking Away to the Cent**	Cents	Money problems with decimals (4.MD.2)
5	**A Plan Is Choices Made Early**	The Plan	Multi-step word problems (4.OA.3)
6	**Four Weeks, One Amount**	The Plan	Dividing with remainders (4.NBT.6, 4.OA.3)
7	**What Goes in a Plan**	The Plan	Multi-step word problems (4.OA.3)
8	**The Plan That Adds Up**	The Plan	Multi-step word problems (4.OA.3)
9	**Price Per One**	Comparing	Dividing with remainders (4.NBT.6)
10	**The Same Money, Two Sizes**	Comparing	Multiplying and dividing (4.NBT.5, 4.NBT.6)
11	**Cheaper Is Not Always Less**	Comparing	Multi-step word problems (4.OA.3)
12	**The Plan Detective**	Review	Multi-step word problems (4.OA.3)
TRIMESTER 2 · WEEKS 13–24 · KEEPING IT			
13	**Write the Plan Down**	Keeping Track	Money problems with decimals (4.MD.2)
14	**Plan and Actual, Side by Side**	Keeping Track	Money problems with decimals (4.MD.2)
15	**The Difference Column**	Keeping Track	Adding and subtracting multi-digit (4.NBT.4)
16	**A Week That Went Over**	Keeping Track	Multi-step word problems (4.OA.3)
17	**Parts of a Whole Amount**	Sharing Out	Equivalent fractions (4.NF.1)
18	**Halves, Quarters, Tenths**	Sharing Out	Comparing and equivalent fractions (4.NF.1, 4.NF.2)

WEEK	TITLE	STRAND	WHAT IT SITS BESIDE IN CLASS
19	**All of It Adds to One**	Sharing Out	Adding fractions with like denominators (4.NF.3)
20	**Every Week, All Year**	Repeating	Multiplying multi-digit numbers (4.NBT.5)
21	**Every Month**	Repeating	Multiplying multi-digit numbers (4.NBT.5)
22	**Small and Often**	Repeating	Multi-step word problems (4.OA.3)
23	**The Thing You Did Not Plan For**	The Unplanned	Multi-step word problems (4.OA.3)
24	**Your Plan, Rewritten**	Review	Multi-step word problems (4.OA.3)
TRIMESTER 3 · WEEKS 25–36 · COMING IN, AND GOING LONG			
25	**Money Coming In**	Coming In	Multi-step word problems (4.OA.3)
26	**When It Is Not the Same Every Time**	Coming In	Multi-step word problems (4.OA.3)
27	**A Rate, and What It Buys**	Coming In	Multiplying, money with decimals (4.NBT.5, 4.MD.2)
28	**Set Some Aside First**	The Unplanned	Multi-step word problems (4.OA.3)
29	**How Big Should It Be?**	The Unplanned	Multi-step word problems (4.OA.3)
30	**A Whole Month of Both Columns**	Keeping Track	Adding and subtracting multi-digit (4.NBT.4)
31	**Where Did It Go?**	Keeping Track	Money problems (4.MD.2)
32	**Was the Plan Right?**	Comparing	Multi-step word problems (4.OA.3)
33	**Change One Thing**	The Plan	Multi-step word problems (4.OA.3)
34	**Months, Not Weeks**	The Plan	Multi-step word problems, remainders (4.OA.3, 4.NBT.6)
35	**Your Plan Book, Finished**	Review	Multi-step word problems (4.OA.3)
36	**Decide It Before**	Review	Multi-step word problems (4.OA.3)

WEEK 1 CENTS

A Dollar Has a Hundred Parts

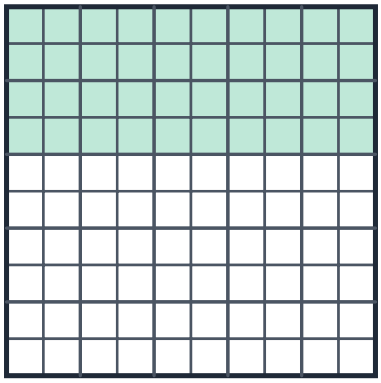
Cents are not a second number written after the dollars. They are pieces of the dollar.

IN CLASS THIS WEEK
Decimal notation for fractions (4.NF.6)

MONEY WARM-UP · 2 MINUTES
Write forty cents as part of a dollar. _____

WORDS TO KEEP

cents	The hundred equal parts of a dollar. $1.00 is one hundred of them.
decimal point	The dot that separates whole dollars from cents.



40 of the 100 parts is $0.40

Why it is written that way

Cut a dollar into a hundred equal parts. One of them is a cent.

So $0.40 is not a four and a zero sitting next to a dollar sign. It is **forty of the hundred parts**, which is why you can also write it 40/100, and why four dimes is the same money as forty pennies.

The dot is there to say where the whole dollars stop. Everything to the left is dollars you have. Everything to the right is pieces of one.

Write it both ways

	In words	As a fraction of a dollar	With a dollar sign
a	forty cents	40/100	$0.40
b	seven cents		
c	ninety cents		
d	three cents		
e	sixty-five cents		

One of these is the one people get wrong most often. Which, and what do they write instead?

▶ ADD TO YOUR PLAN BOOK

Start your Plan Book with this page: a dollar drawn as a hundred squares, with $0.40 shaded and written three ways.

💬 TALK ABOUT IT

Pick a price on these pages with cents in it. Say it out loud to somebody at home as parts of a dollar.

Why does a dollar have a hundred parts and not ten?



STUCK? TRY THIS

Say the number of cents first. Then ask yourself how many hundredths that is.

★ CHALLENGE ZONE

A dollar has 100 parts. How many parts is $2.30? Now how many parts is $2.03, and how far apart are those two answers?

WEEK 2 CENTS

Which Is More?

$4.09 and $4.90 look almost the same and are eighty-one cents apart.

IN CLASS THIS WEEK
Comparing decimals to hundredths (4.NF.7)

MONEY WARM-UP · 2 MINUTES
Which is more, $3.5 or $3.45? _____

WORDS TO KEEP

more Bigger, once you have lined the decimal points up. $4.90 beats $4.09.



one dollar, cut into a hundred

Line up the points, not the ends

Compare the dollars first. If they are the same, compare the tenths. Only then the hundredths.

$4.09 and $4.90 both have four dollars. Then one has zero tenths and the other has nine. That settles it before you ever look at the last digit.

The trap is reading the cents as an ordinary number and thinking 09 and 90 are nine and ninety of the same thing. They are not. Nine hundredths and ninety hundredths. One of them is nearly a whole dollar.

More, less, or the same?

	This	or this	Which is more?	By how much?
a	$4.09	$4.90	$4.90	$0.81
b	$2.50	$2.05		
c	$7.30	$7.3		
d	$0.99	$1.01		
e	$6.40	$6.04		

One row is a trick: the two are the same money written two ways. Which row, and why is it allowed?

TALK ABOUT IT

Which is more, ninety cents or nine cents? Now say them as $0.90 and $0.09.

Where in a store would getting this wrong cost you the most?



STUCK? TRY THIS

Write both amounts one above the other with the points in a line. The columns will answer it for you.

★ CHALLENGE ZONE

Write four different amounts that are all more than $5.09 and less than $5.90. How many are there altogether?

WEEK 3 CENTS

Adding to the Cent

Two prices, added properly, with nothing rounded away.

IN CLASS THIS WEEK
Money problems with decimals (4.MD.2)

MONEY WARM-UP · 2 MINUTES
$2.45 + $1.30 = _____

WORDS TO KEEP

line up Put every decimal point in one column, one under the other, before you add.



The points go under each other

$2.45 + $1.30 + $0.75. Stack them so every point is in one vertical line, then add each column.

Ten hundredths make a tenth and ten tenths make a dollar, the same way ten ones make a ten. So the carrying works exactly as it always did. Nothing new is happening; the columns just have names now.

Write the point in the answer **before** you add, straight down from the others. Putting it in afterward is where the lost dollar comes from.

Add these baskets

	Things in the basket	Total
a	$2.45, $1.30, $0.75	$4.50
b	$3.20, $0.95	
c	$1.05, $1.05, $1.05	
d	$6.40, $2.60	
e	$0.85, $0.85, $2.30	

Two of these come to a whole number of dollars with no cents left. Which two?

▶ ADD TO YOUR PLAN BOOK

Add a page headed To the Cent, with three prices you made up and their total, added in columns.

💬 TALK ABOUT IT

Make up three prices with cents in them. Add them top to bottom, then bottom to top. Same answer?

Why do the points have to be lined up and not the last digits?



STUCK? TRY THIS

Put a zero on the end of any amount with only one digit after the point. $3.5 becomes $3.50 and then everything lines up.

★ CHALLENGE ZONE

A basket comes to $9.99. Add one more thing and make the total a whole number of dollars. What are the three cheapest things that would do it?

WEEK 4 CENTS

Taking Away to the Cent

What comes back, worked out exactly, before the person at the register tells you.

IN CLASS THIS WEEK
Money problems with decimals (4.MD.2)

MONEY WARM-UP · 2 MINUTES
You pay $10 for something costing $6.35. Your change? _____

WORDS TO KEEP

exact To the cent, with nothing rounded. A price is always exact.



Ten dollars is ten dollars and no cents

$10.00 − $6.35. Write the ten as **$10.00** and the subtraction is ordinary.

The answer is $3.65. You can check it the other way around without a pencil: count up from $6.35 to $7.00, which is 65 cents, then $7.00 to $10.00, which is $3. Sixty-five cents and three dollars.

Two ways to the same answer is not showing off. It is how you find out you were wrong, and it is the only checking method that works while somebody is waiting for you.

What comes back?

	It costs	You hand over	Change	Check by counting up
a	$6.35	$10.00	$3.65	65c then $3
b	$4.80	$5.00		
c	$6.25	$20.00		
d	$7.99	$10.00		
e	$3.06	$5.00		

In one row the change is more than what the thing cost. Which row, and roughly how many times more?

TALK ABOUT IT

Next time you see somebody pay, work out the change before they get it.

Is it rude to check your change? What would you actually do?



STUCK? TRY THIS

Write the amount you handed over with two zeros after the point. Then subtract the ordinary way.

★ CHALLENGE ZONE

You get $1.15 in change and you were given four coins. What could they have been? Find every answer you can.

WEEK 5 THE PLAN

A Plan Is Choices Made Early

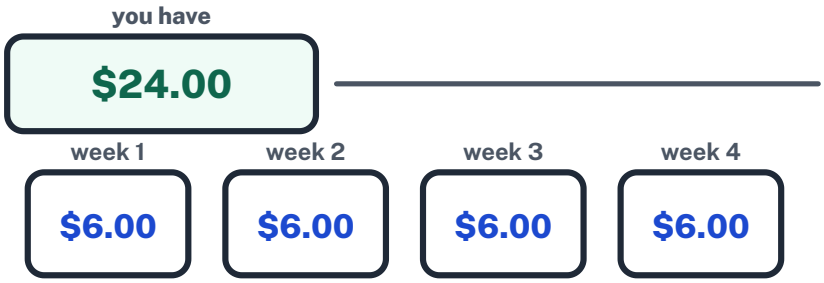
You already know how to choose. This year you choose in advance, for four weeks at a time.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
You get $6 a week for 4 weeks. How much altogether? _____

WORDS TO KEEP

a plan — What you decided to do with your money before you were standing in front of it.



Deciding in the store is not deciding

A plan is what you decided to do with your money before you were standing in front of the thing.

You may already know that picking one means not having the other. That is true whether you notice it or not. The difference a plan makes is that you do the noticing early, sitting down, when nobody is waiting and nothing is shiny.

It is not a rule somebody else made you follow. You wrote it. You are allowed to change it, and week 33 is about doing exactly that. But changing a plan on purpose is a different thing from never having had one.

Plan, or not a plan?

	What somebody said	Is it a plan?	Why
a	I will save some money	no	no amount, no time
b	I will put $2 away every week for 4 weeks		
c	I want a $30 game		
d	$3 a week for snacks and $2 a week saved, for 4 weeks		
e	I will not waste money		

The rows that are plans have two things in them. Every row that is not a plan is missing at least one of the two. What are they?

▶ ADD TO YOUR PLAN BOOK

Add a page headed My First Plan: an amount, four weeks, and what each week is for. You will come back to it in week 24, when you write the second one.

💬 TALK ABOUT IT

Tell somebody at home or at school one plan you could make for the next four weeks.

What is the difference between a plan and a wish? Use one of the rows above.



STUCK? TRY THIS

A plan has an amount and a stretch of time. If you cannot point at both, it is not one yet.

★ CHALLENGE ZONE

Write a plan for $24 over four weeks that would still work if one week you got nothing. What did you have to give up to make it survive that?

WEEK 6 THE PLAN

Four Weeks, One Amount

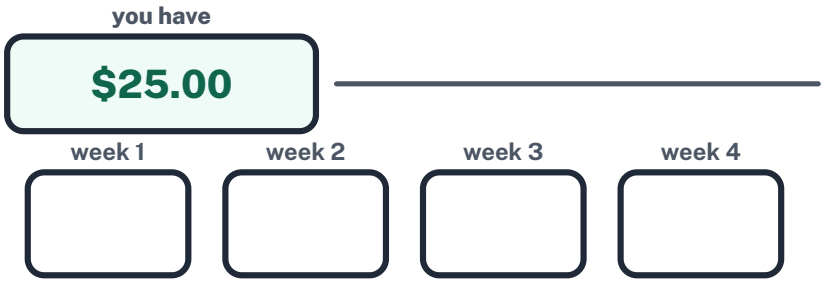
Splitting an amount evenly, and what to do with what is left over.

IN CLASS THIS WEEK
Dividing with remainders (4.NBT.6, 4.OA.3)

MONEY WARM-UP · 2 MINUTES
$25 split evenly over 4 weeks. How much each week? _____

WORDS TO KEEP

split Cut an amount into equal parts, one for each week.



The remainder has to go somewhere

$25.00 into 4 weeks is $6.25 each, and that is exact.

But $25 into 6 weeks is $4.16 and a bit, and the bit is real money that has to end up somewhere. You cannot hand somebody part of a cent. So you decide: $4.16 a week and 4 cents left at the end, or $4.15 a week and 10 cents left, or one week gets a little more than the others.

None of those is the right answer. Choosing one and writing it down is the right answer, because the money exists whether or not your plan mentions it.

Split it

	Amount	Weeks	Each week	Left over
a	$25.00	4	$6.25	nothing
b	$24.00	5		
c	$20.00	3		
d	$16.00	3		
e	$22.00	6		

Two rows come out exactly even. Three do not. Of those three, one leaves more unaccounted for than the other two. Which row, and where would you put the money?

TALK ABOUT IT

Choose an amount of your own and split it over four weeks. Is it even?

When would you rather have an uneven split than an even one?



STUCK? TRY THIS

Divide as usual. If it does not go in exactly, the part that will not divide is the leftover, and it is measured in cents.

★ CHALLENGE ZONE

Find an amount under $50 that splits evenly over 4 weeks, over 5 weeks, and over 6 weeks. How did you look for it?

WEEK 7 THE PLAN

What Goes in a Plan

Naming the groups, so that a plan is about kinds of spending rather than about things.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
$2 for snacks, $3 for a gift, $1 saved. Total? _____

WORDS TO KEEP

category A group of things you spend on, named so you can add them up.

What for	Planned
snacks	$2.00
a gift	$3.00
saving	$1.00
Altogether	

A category is a group with a name

A plan does not list the things. It lists the **kinds** of things, and how much each kind gets.

You cannot list the things, because you do not know yet what they will be. You do not know on Monday which snack you will want on Thursday. But you can know that snacks get two dollars.

Three or four categories is enough at this size. Ten categories for twelve dollars is not a better plan, it is a plan you will stop keeping by the second week, and a plan nobody keeps is worth nothing at all.

Sort them into categories

	The thing	Which category?
a	a chocolate bar	snacks
b	a birthday present for your cousin	
c	money put in a jar for later	
d	a comic	
e	a bag of chips shared at lunch	

Now write three categories of your own that would cover everything you spend on. Is there anything left over that fits none of them?

▶ ADD TO YOUR PLAN BOOK

Add a page headed My Categories, with three or four of them and one line saying what belongs in each.

💬 TALK ABOUT IT

Tell somebody at home or at school your three categories. Can they tell what goes in each one from the name alone?

Is a present for somebody else in the same category as a treat for you?



STUCK? TRY THIS

Ask what kind of thing it is, not what the thing is. A comic and a book are the same kind.

★ CHALLENGE ZONE

Two people spend exactly the same money and write completely different categories. Is one of them wrong? Say what makes a set of categories good.

WEEK 8 THE PLAN

The Plan That Adds Up

If the parts do not come to the whole, it is not a plan yet.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
$3 + $4 + $2 out of $10. How much is unassigned? _____

WORDS TO KEEP

adds up to The parts of a plan together make the whole amount. If they do not, it is a wish.



Every dollar has a job or it does not

Add the categories up. If they come to less than what you have, the rest is not saved. It is unassigned, which is different.

Unassigned money gets spent, and it gets spent on nothing you would have chosen, because nobody chose it. That is not a character flaw. It is what happens to money with no job.

If the categories come to **more** than you have, the plan is impossible and you found out now, at a table, instead of in week three when something you promised somebody has to be canceled.

Does the plan add up?

	The categories	You have	Adds to	Too much, too little, or exact
a	$3, $4, $2	$10.00	$9.00	$1 not assigned
b	$5, $5	$10.00		
c	$6, $3, $2	$10.00		
d	$2.50, $2.50, $4	$10.00		
e	$4, $4, $4	$10.00		

Two rows are impossible. One is exact. Two leave money with no job. Say what you would do about each of the two.

▶ ADD TO YOUR PLAN BOOK

Add a page headed Does It Add Up: your plan, the total of its categories, and the amount you have, with the two compared.

💬 TALK ABOUT IT

Show your plan to somebody at home or at school and add it up in front of them.

Is money with no job the same as saved money? Argue it both ways.



STUCK? TRY THIS

Add the categories first, then compare that total with what you have. The comparison is the whole exercise.

★ CHALLENGE ZONE

Make a plan for $12 with four categories where no two get the same amount and every dollar has a job. Now do it again with five categories.

WEEK 9 COMPARING

Price Per One

Dividing to find what a single one costs, to the cent, instead of guessing.

IN CLASS THIS WEEK
Dividing with remainders (4.NBT.6)

MONEY WARM-UP · 2 MINUTES
6 pens cost $3.00. What is one pen? _____

WORDS TO KEEP

per one What a single one costs, worked out by dividing.

4 in a pack	10 in a pack
$3.00	**$6.50**
each:	each:

divide the price by how many are in it

Divide, do not eyeball it

$3.00 for 4 is 75 cents each. $6.50 for 10 is 65 cents each. The bigger pack is cheaper per one, and now you know it rather than assume it.

A rough answer says the big box is probably better value. It usually is. **Usually** is the word doing the work there, and this year you can settle it in one division.

The answer is money, so it goes to the cent. If the division does not come out even, the price per one is between two amounts and you say so: $1.00 for 3 is about 33 cents each, and the missing cent is real.

What does one cost?

	How many	Price	Each
a	4	$3.00	$0.75
b	10	$6.50	
c	5	$4.00	
d	8	$2.00	
e	3	$1.00	

One row does not divide evenly into cents. Which one, and what would you write for it?

💬 **TALK ABOUT IT**

Make up two pack sizes of the same thing, give each a price, and work out each per one.

Does the store want you to be able to do this quickly? Why might it not?



STUCK? TRY THIS

Divide the price by how many are in the pack. Keep the answer in cents so you can compare.

★ **CHALLENGE ZONE**

Two packs cost the same per one but one is a better buy anyway. Invent the two packs and explain.

WEEK 10 COMPARING

The Same Money, Two Sizes

Two packs, one budget, and the arithmetic that says which one your money likes.

IN CLASS THIS WEEK
Multiplying and dividing (4.NBT.5, 4.NBT.6)

MONEY WARM-UP · 2 MINUTES
$0.75 each. How many can you buy with $6.00? _____

WORDS TO KEEP

per one What a single one costs, worked out by dividing.

6 in a pack	15 in a pack	1 loose
$4.20	**$9.00**	**$0.80**
each:	each:	each:

divide the price by how many are in it

Two questions, not one

How much is one? And how many do I get for what I have?

$4.20 for 6 is 70 cents each. $9.00 for 15 is 60 cents each. The fifteen-pack wins on price per one, comfortably.

Now the other question. If you have $5.00, the fifteen-pack is not an option at all, and the comparison you just did does not help you. The cheapest thing per one that you cannot afford is not cheap. It is unavailable.

Work both questions

	Pack	Price	Each	How many you take home with $6.00
a	6	$4.20	$0.70	6
b	15	$9.00		
c	1 loose	$0.80		
d	4	$2.00		
e	20	$8.00		

With exactly $6.00, which row lets you take home the most of them? Is it the same row as the cheapest per one?

TALK ABOUT IT

Pick something sold in two sizes, in a store or on a flyer. Which would you buy?

Why might somebody buy the big one and then not use it all?



STUCK? TRY THIS

Do the per one first, in cents. Then ask separately how many whole packs your money reaches, and count what is in them.

★ CHALLENGE ZONE

You have $10.00 and a thing is sold loose at $0.80 or in fifteens at $9.00. What is the most you can take home, and what is left in your hand?

WEEK 11 COMPARING

Cheaper Is Not Always Less

The best price per one, on more than you wanted, is more money out of your hand.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
You need 2. A pack of 6 costs $3.00. What do you pay? _____

WORDS TO KEEP

more than you need A price that is lower per one and higher in total, because you had to buy six.

2 loose, 90c each	pack of 6
$1.80	$3.00
per one:	per one:
$0.90	$0.50

you need 2. The big number is what you pay today.

Per one is not the only number

Two loose ones at 90 cents is $1.80. A pack of six is $3.00, which is 50 cents each. The pack is far cheaper per one and costs you $1.20 more today.

Both of those sentences are true at the same time and people argue about which one counts. Here is the honest answer: it depends entirely on whether you will use the other four.

If you will, the pack was cheaper. If they sit in a drawer for a year, you paid $3.00 for two, which is $1.50 each, and the cheapest-looking option was the most expensive one you could have picked.

What do you actually pay?

	You need	Loose price	Pack	Loose total	Pack total
a	2	$0.90	6 for $3.00	$1.80	$3.00
b	5	$0.90	6 for $3.00		
c	8	$0.90	6 for $3.00		
d	12	$0.90	6 for $3.00		
e	1	$0.90	6 for $3.00		

There is a number of them where the pack stops being worse and starts being better. Find it, and say what happens exactly at that number.

▶ ADD TO YOUR PLAN BOOK

Add a page headed More Than I Needed: the two options, both totals, and which one you would take.

💬 TALK ABOUT IT

Make up a time when buying more would be the wrong call. Tell somebody.

Who benefits from the pack being cheaper per one?



STUCK? TRY THIS

Work out what leaves your hand today for each option. Compare those two numbers, not the per one.

★ CHALLENGE ZONE

The pack is 6 for $3.00 and loose are 90 cents. For which numbers needed is the pack cheaper? Write the whole list from 1 to 12.

WEEK 12 REVIEW

The Plan Detective

Everything from weeks 1 to 11, on one plan somebody else wrote badly.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
$4.09, $4.90, $1.01. Which is the largest? _____

What for	Planned
snacks	$4.09
presents	$4.90
other	$2.90
comics	$1.01
Altogether	**$12.00**

Four things wrong with this plan

Somebody has $12.00 and wrote the plan above. It has at least four problems and every one of them is something you learned since week 1.

Start with the arithmetic: does it add up? Then look at the two amounts at the top and read them carefully. Then look at what the categories are called. Then ask what a plan needs that this one never says.

Answer them on page 2, in sentences, not in numbers. A detective says what happened, not just which number is wrong.

The evidence

	The question	Your answer
a	Do the four categories add up to $12.00?	
b	If not, how far off and in which direction?	
c	Which two amounts look almost the same? How far apart are they?	
d	Which category has a name that does not say what it is for?	
e	Week 5 said a plan needs two things. Which one is missing here?	

Now rewrite the plan so it adds to exactly $12.00, keeping the same four categories, and say what you changed and why.

_____

_____

💬 TALK ABOUT IT

Show your rewritten plan to somebody at home or at school and defend one change.

Which of the four problems would matter most in real life?



STUCK? TRY THIS

Add the four amounts first. Everything else is easier once you know whether the plan is over or under.

★ CHALLENGE ZONE

Write a plan for $12.00 that adds up exactly, has four categories, and where no category gets a whole number of dollars.

WEEK 13 KEEPING TRACK

Write the Plan Down

The plan column. Filled in before the week starts, and not touched afterward.

IN CLASS THIS WEEK
Money problems with decimals (4.MD.2)

MONEY WARM-UP · 2 MINUTES
$2.50 + $3.25 + $1.75 = _____

WORDS TO KEEP

the plan column What you said you would spend, written before the week starts.

Written before, in ink

The plan column is what you said you would spend. It is written before the week starts and then it does not change.

That last part is the whole trick. If you are allowed to edit the plan while the week is happening, then at the end of the week the plan will match perfectly, every time, and you will have learned nothing at all. A plan that is always right is not being checked.

Next week a second column arrives beside it, and the gap between them is the only thing in this book that can tell you something about yourself.

Practice money

A made-up plan and four weeks of what really happened. Use it for your Plan Book, or use your own money. Nobody has to say which. $9.00 comes in every week.

What for	Planned	Week 1	Week 2	Week 3	Week 4
snacks	$2.00	$3.00	$3.00	$3.00	$3.00
comics	$2.00	$1.50	$1.50	$1.50	$1.50
presents	$3.00	$1.50	$4.50	$3.50	$4.50
saving	$2.00	$2.00	$2.00	$1.00	$1.00

Fill in the plan column

	What for	Planned
a	snacks	$2.50
b	presents	$3.25
c	saving	$1.75
d	Altogether	

Add the three. Then copy the practice plan from page 1 into your Plan Book, or write one for your own money. Nobody has to say which.

▶ ADD TO YOUR PLAN BOOK

Add a page headed The Plan Column, with next week's plan filled in and the date you wrote it.

💬 TALK ABOUT IT

Tell somebody at home or at school what your plan column says, before the week starts.

Why should the plan column not be changed once the week has begun?



STUCK? TRY THIS

Write the categories down the left. Amounts down the right. Total at the bottom, underlined.

★ CHALLENGE ZONE

Write a plan column where the categories add to exactly $7.50 and every amount ends in 25, 50 or 75 cents.

WEEK 14 KEEPING TRACK

Plan and Actual, Side by Side

The second column, filled in as the week happens, next to the first.

IN CLASS THIS WEEK
Money problems with decimals (4.MD.2)

MONEY WARM-UP · 2 MINUTES
Planned $2.50, spent $3.10. More or less? _____

WORDS TO KEEP

the actual column What you really spent, written as it happens.

What for	Planned	Actual
snacks	$2.50	$3.10
presents	$3.25	$3.25
saving	$1.75	$1.00

Two columns, written at two different times

The plan column was written before. The actual column is written as the money leaves, on the day it leaves.

On the day, not on Sunday from memory. Memory is generous about small amounts and this book is not going to pretend otherwise. Writing $1.20 down on Tuesday takes four seconds; reconstructing Tuesday on Sunday takes ten minutes and gets it wrong.

Notice the middle row above. Planned $3.25, spent $3.25. That is allowed to happen and it is worth noticing when it does.

Read the two columns

	What for	Planned	Actual	Which is bigger?
a	snacks	$2.50	$3.10	actual
b	presents	$3.25	$3.25	
c	saving	$1.75	$1.00	
d	comics	$1.00	$0.00	
e	Altogether			

Add each column. Which total is bigger, and does that match what you would have guessed from looking at the rows?

▶ ADD TO YOUR PLAN BOOK

Add a page headed Plan and Actual, with both columns for one week: practice week 1 from week 13, or your own.

💬 TALK ABOUT IT

Copy practice week 1 from week 13 beside its plan, or keep your own for three days.

Which is harder, making the plan or writing down what really happened?



STUCK? TRY THIS

Two totals at the bottom, one under each column. Compare the totals last, after the rows.

★ CHALLENGE ZONE

Invent a week where three rows are over plan and the total is still under plan. What has to be true?

WEEK 15 KEEPING TRACK

The Difference Column

Over, under, or exactly nothing. The third column is where the plan answers back.

IN CLASS THIS WEEK
Adding and subtracting multi-digit (4.NBT.4)

MONEY WARM-UP · 2 MINUTES
Planned $1.75, spent $1.00. The difference? _____

WORDS TO KEEP

the difference Plan minus actual. Over, under, or exactly nothing.

What for	Planned	Actual	Over or under
snacks	$2.50	$3.10	$0.60 over
presents	$3.25	$3.25	nothing
saving	$1.75	$1.00	$0.75 under
comics	$1.00	$0.00	

Say which way, not just how much

Plan minus actual. But 60 cents is not an answer on its own: 60 cents **over** and 60 cents **under** are opposite pieces of news.

So every difference gets a direction written next to it. Over means you spent more than you said. Under means you spent less. Nothing means they matched, which is worth writing down rather than leaving blank, because a blank looks like you forgot.

Under is not automatically good, by the way. The saving row above is 75 cents under, and being under on saving means you saved less than you meant to.

Fill in the difference

	What for	Planned	Actual	Difference, and which way
a	snacks	$2.50	$3.10	$0.60 over
b	presents	$3.25	$3.25	
c	saving	$1.75	$1.00	
d	comics	$1.00	$0.00	
e	bus	$2.00	$2.40	

Two rows are under and being under is bad news in one of them and good news in the other. Which is which, and why?

▶ ADD TO YOUR PLAN BOOK

Add a page headed The Difference, with all three columns for your week and a sentence about the biggest gap.

💬 TALK ABOUT IT

Work out the difference column for your week in the Plan Book.

Is being under always good? Find the row that says no.



STUCK? TRY THIS

Take the smaller from the bigger, then write over or under depending on which one was bigger.

★ CHALLENGE ZONE

The difference column for five categories comes to zero altogether, and not one row matched. Invent it.

WEEK 16 KEEPING TRACK

A Week That Went Over

One category is empty and it is Thursday. This is the ordinary case, not the disaster.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
Snacks got $3.00. You have spent $3.40. Over by? _____

WORDS TO KEEP

ran out A category with nothing left in it, while the week is not over.

What for	Planned	Actual	Over or under
snacks	$3.00	$3.40	$0.40 over
comics	$2.00	$0.50	$1.50 under
saving	$2.00	$2.00	nothing

Three honest things you can do

Snacks is 40 cents over with three days left. Comics is $1.50 under. Nobody is in trouble; a decision is needed.

Move it. Take 40 cents from comics and write it in both places, so the plan still adds up. **Stop.** Snacks is done for this week and that is what running out means. **Go over.** Spend it anyway and write down that the week finished over, so next week's plan knows.

All three are real answers. The one that is not an answer is spending it and not writing it down, because then the plan quietly becomes a story about a person who does not exist.

What would you do?

	The situation	Move it, stop, or go over?	Why
a	Snacks over 40c, comics $1.50 under		
b	Snacks over 40c, everything else exact		
c	Presents over $2, and the present is for tomorrow		
d	Bus over 80c, you have to get home, and nothing else has room		
e	Snacks over $1.50 on Monday		

One of these has only one honest answer. Which, and what does that tell you about categories you cannot stop?

TALK ABOUT IT

Tell somebody at home or at school which row above was hardest to decide, and what you chose.

Is moving money between categories cheating? Say what makes it not cheating.



STUCK? TRY THIS

Ask two questions: does this have to happen, and is there another category with room in it?

★ CHALLENGE ZONE

Your plan has four categories. Two of them are ones you cannot stop. How should that change the amounts you put in them at the start?

WEEK 17 SHARING OUT

Parts of a Whole Amount

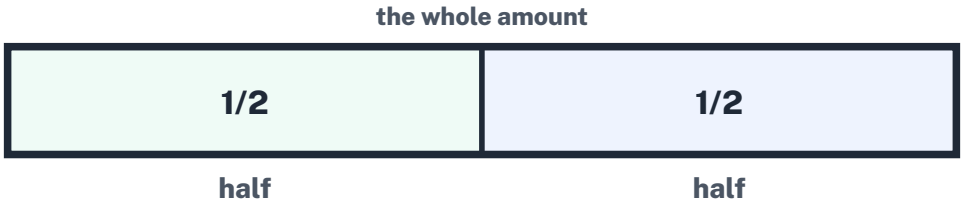
A fraction of money, not a fraction of a shape. Half of $12 is a number of dollars.

IN CLASS THIS WEEK
Equivalent fractions (4.NF.1)

MONEY WARM-UP · 2 MINUTES
Half of $12.00 is _____

WORDS TO KEEP

a part of it A fraction of an amount of money, not of a shape.



Cut the amount, not the picture

Half of $12.00 is $6.00. A quarter of $12.00 is $3.00. Three quarters is $9.00.

In math class this year you cut shapes into equal parts and compare them. Here the thing being cut is an amount of money, and the answer comes out in dollars and cents rather than as a fraction.

To find a quarter, divide by 4. To find three quarters, divide by 4 and then multiply by 3, or take a quarter away from the whole. Both routes arrive at $9.00, and doing it both ways is how you find out you did it right.

Take the part

	The amount	The part	How much
a	$12.00	one half	$6.00
b	$12.00	one quarter	
c	$12.00	three quarters	
d	$20.00	one tenth	
e	$20.00	three tenths	

Which is more, three quarters of $12.00 or one half of $20.00? Show your work, not just the answer.

TALK ABOUT IT

Choose an amount of your own and find a half and a quarter of it.

Why is half of a big amount more than half of a small one, even though both are halves?



STUCK? TRY THIS

Divide by the bottom number of the fraction. Then multiply by the top one.

★ CHALLENGE ZONE

Find an amount of money where one third of it and one quarter of it are both whole numbers of dollars with no cents. What is the smallest one?

WEEK 18 SHARING OUT

Halves, Quarters, Tenths

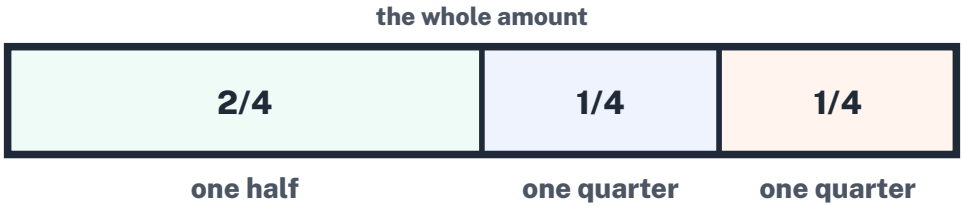
Two fractions that look different and come to the same money.

IN CLASS THIS WEEK
Comparing and equivalent fractions (4.NF.1, 4.NF.2)

MONEY WARM-UP · 2 MINUTES
Which is more of $20, one half or six tenths? _____

WORDS TO KEEP

the same size Two fractions that come to the same money. A half and two quarters.



Same money, different words

Half of $20.00 is $10.00. Five tenths of $20.00 is $10.00. Two quarters of $20.00 is $10.00. Same money, three ways of saying it.

This matters because people describe plans out loud in fractions and they do not all use the same ones. One person says half goes to saving, another says five tenths, and they mean the identical thing.

The way to settle any of it is to turn the fraction into money. Money does not have opinions: $10.00 is $10.00 however you arrived at it.

Same or different?

	Of $20.00	and	Same money?	How much each
a	one half	five tenths	yes	$10.00 and $10.00
b	one quarter	two tenths		
c	three quarters	seven tenths		
d	one half	two quarters		
e	one tenth	one quarter		

Two rows come out the same. In the three that do not, which of the pair is bigger, and by how much?

▶ ADD TO YOUR PLAN BOOK

Add a page headed Same Money, Different Words, with your plan written once in dollars and once in fractions.

💬 TALK ABOUT IT

Say your own plan out loud in fractions instead of amounts.

Is it easier to think in fractions or in dollars? Does it depend on the amount?



STUCK? TRY THIS

Turn both into money first. Then the comparison is just two amounts.

★ CHALLENGE ZONE

For which amounts of money do one quarter and two tenths come out to a whole number of cents for both? Try $20, $25 and $30.

WEEK 19 SHARING OUT

All of It Adds to One

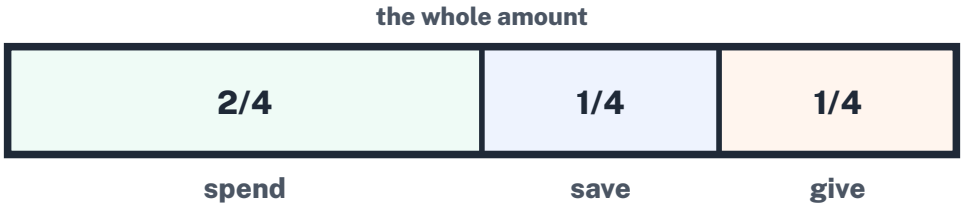
Spend, save and give, written as fractions that have to reach one whole.

IN CLASS THIS WEEK
Adding fractions with like denominators (4.NF.3)

MONEY WARM-UP · 2 MINUTES
1/4 + 2/4 = _____

WORDS TO KEEP

all of it The three parts of a plan add to one whole. Nothing is left unassigned.



Quarters that reach four quarters

Two quarters to spend, one quarter to save, one quarter to give. 2/4 + 1/4 + 1/4 = 4/4, which is one whole.

This is week 8 again, said differently. There the categories had to add to the amount you had. Here the fractions have to add to one. They are the same requirement, and if you can see that, you can check any plan in whichever form somebody hands it to you.

Adding fractions with the same bottom number is easy: add the tops, keep the bottom. The bottom is what you cut the money into, and cutting does not change just because you are counting the pieces.

Does it reach one whole?

	Spend	Save	Give	Adds to	One whole?
a	2/4	1/4	1/4	4/4	yes
b	1/2	1/4	1/4		
c	3/5	1/5	1/5		
d	5/10	2/10	2/10		
e	2/3	1/3	1/3		

One row goes past one whole. What would that mean if it were a real plan, and which of the three parts would you cut?

▶ ADD TO YOUR PLAN BOOK

Add a page headed Spend, Save, Give, with your three fractions, your three amounts, and the check that they reach one whole.

💬 TALK ABOUT IT

Write your own plan as three fractions. Do they reach one?

Is it possible for a plan to add to less than one whole on purpose?



STUCK? TRY THIS

Add the top numbers. If the bottom numbers are not the same, change one of them first so they are.

★ CHALLENGE ZONE

Write a spend, save and give plan using tenths where no part is the same size and the give part is the smallest. How many different ones can you make?

WEEK 20 REPEATING

Every Week, All Year

A number too small to care about once, multiplied by the times it comes back.

IN CLASS THIS WEEK
Multiplying multi-digit numbers (4.NBT.5)

MONEY WARM-UP · 2 MINUTES
$3.00 a week for 10 weeks is _____

WORDS TO KEEP

every week A cost that comes back. Multiply it by the weeks to see it properly.

$3.00 every week



10 of them

Multiply it before you decide

$3.00 a week does not sound like a decision. Over a school year of 40 weeks it is $120.00, which absolutely is one.

Nobody is saying do not spend it. The point is that the number you should be looking at when you decide is $120.00, and the number in front of you is $3.00. Those feel like different sizes of question and they are the same question.

This is the reason a plan covers a stretch of time rather than a day. A day cannot show you a repeating cost, because on any single day the repeating cost looks like three dollars.

What does it come to?

	Each week	Weeks	Altogether
a	$3.00	10	$30.00
b	$3.00	40	
c	$1.50	40	
d	$0.75	40	
e	$5.00	52	

One row is a cost of less than a dollar and still comes to more than a week of somebody's plan. Which, and what does that tell you?

💬 **TALK ABOUT IT**

Pick one thing you might buy every week and give it a price. Multiply it out over 40 weeks. Would knowing the year total change what you would buy? Should it?



STUCK? TRY THIS

Multiply the weekly amount by the number of weeks. Keep the cents in until the end.

★ **CHALLENGE ZONE**

A thing costs $2.50 a week. How many weeks before it has cost more than a $60 thing you could have bought once?

WEEK 21 REPEATING

Every Month

Twelve times a year instead of fifty-two, and it still adds up faster than it feels.

IN CLASS THIS WEEK
Multiplying multi-digit numbers (4.NBT.5)

MONEY WARM-UP · 2 MINUTES
$8.00 a month for 12 months is _____

WORDS TO KEEP

every month The same, twelve times a year instead of fifty-two.

$8.00 every month



12 of them

A month hides it better than a week

$8.00 a month is $96.00 a year. Twelve is a small number and it does most of its work out of sight.

Monthly costs are harder to notice than weekly ones, because a month is long enough that you have forgotten paying it last time. That makes a monthly price easy to agree to.

The arithmetic is not the hard part here. Multiplying by 12 is something you can already do. The hard part is remembering to, for a cost that nobody is putting in front of you.

A year of it

	Each month	A year is	More or less than $100?
a	$8.00	$96.00	less
b	$10.00		
c	$4.50		
d	$12.99		
e	$2.25		

Put the five monthly amounts in order from smallest to largest. Now put the five yearly amounts in order. Is it the same order? Why must it be?

TALK ABOUT IT

Think of something a person could pay for every month. Make up a price and multiply it by 12. Why might a seller prefer to charge you monthly rather than once?



STUCK? TRY THIS

Multiply by 12. Then compare with $100 by lining the numbers up.

★ CHALLENGE ZONE

One cost is $9.00 a month and another is $2.00 a week. Which is more over a year, and by how much? What made this harder than it looked?

WEEK 22 REPEATING

Small and Often

The costs that are too small to argue about and large enough to matter.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
$0.99 three times a week for 4 weeks is _____

WORDS TO KEEP

small and often A cost too small to notice once and large enough to matter added up.

$0.99 every time



12 of them

Twice is not a habit and forty times is

Ninety-nine cents, three times a week, for a school year: $0.99 × 3 × 40 = $118.80.

Every single one of those was an easy yes. That is the whole mechanism. No individual ninety-nine cents was ever worth stopping to think about, and the total is a bicycle.

This is not an argument for never buying anything. It is an argument for knowing the yearly number of the things you buy often, because that is the only number that lets you compare them against the things you buy rarely.

How often, and how much

	Each time	Times a week	Over 40 weeks
a	$0.99	3	$118.80
b	$0.50	5	
c	$2.00	1	
d	$1.25	2	
e	$0.25	10	

Row e is a quarter, which is the smallest amount on this page, and it is not the smallest total. Put the five totals in order and say what decides the order.

▶ ADD TO YOUR PLAN BOOK

Add a page headed Small and Often: one thing people buy often, the amount, how often, and the 40-week total.

💬 TALK ABOUT IT

Name three things under a dollar that people buy often. Which has the biggest 40-week total? Is a small cost that repeats worse than one big cost of the same size?



STUCK? TRY THIS

Multiply the amount by the times a week first. Then multiply that by the weeks.

★ CHALLENGE ZONE

Two costs come to the same over 40 weeks. One is under a dollar and happens often, the other is over five dollars and happens rarely. Invent them both.

WEEK 23 THE UNPLANNED

The Thing You Did Not Plan For

A cost nobody could have known about. It is not a mistake and the plan still has to eat it.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
Your plan has $2.00 spare. A cost of $6.50 arrives. Short by? _____

WORDS TO KEEP

did not plan for A cost you could not have known about. Not a mistake.

What for	Planned	Actual	Over or under
snacks	$3.00	$3.00	nothing
presents	$4.00	$4.00	nothing
saving	$2.00	$0.00	$2.00 under
the broken thing	$0.00	$6.50	$6.50 over

Every plan meets one of these

Something breaks. Something gets lost. A price goes up without warning. The plan said nothing about it because the plan could not have.

Look at the bottom row above. The plan column says $0.00, which is honest: nothing was planned. The actual column says $6.50, which is also honest. Writing the row in with a zero is better than leaving it out, because leaving it out makes the month look like a month that did not happen.

Where does the $6.50 come from? Somewhere. Saving got emptied above and it is still $4.50 short. Week 28 is about arranging, in advance, for there to be a better answer than emptying saving.

Where does it come from?

	What happened	It costs	Spare in the plan	Short by
a	shoes came apart	$6.50	$2.00	$4.50
b	lost a library book	$8.00	$3.50	
c	a birthday you forgot	$5.00	$5.00	
d	bus fare went up	$1.20	$0.00	
e	broke somebody's thing	$12.00	$4.00	

One of these five is not really unplanned, and a better plan would have had it in. Which one, and which category would it have gone in?

💬 **TALK ABOUT IT**

Tell somebody at home or at school which row above was hardest to see coming, and why. Is a birthday you forgot the same kind of surprise as a shoe coming apart?



STUCK? TRY THIS

Take the spare away from the cost. What is left is what has to come from somewhere else.

★ **CHALLENGE ZONE**

Over a year, how many surprises like these would you guess arrive? What would you have to set aside each week to cover that many?

WEEK 24 REVIEW

Your Plan, Rewritten

Everything from weeks 13 to 23, applied to your plan, on purpose.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
A plan of $3, $4, $2 and a surprise of $5. Total needed? _____

What for	Planned	Actual	Over or under

Rewrite it with what you know now

Your first plan was written in week 5, before you had kept one. You have kept one since week 13. Write the second one.

Look back at your difference columns, or the four practice weeks on week 13's page 1. Which category was over nearly every week? That amount was wrong, not your behavior, and the fix is to put more in it and less somewhere else. Which category was under every week? That money was never going to be spent there.

Change the amounts. Keep the categories unless one of them never had anything in it. And say, in a sentence under the plan, what you changed and what evidence made you change it.

The evidence for the new plan

	Question	Your answer
a	Which category was over most often?	
b	By about how much, in a normal week?	
c	Which category was under most often?	
d	What is the new amount for each of those two?	
e	Does the new plan still add up to what you have?	

If you moved money from one category to another, the total did not change. Check that it did not, and write the two totals side by side.

▶ ADD TO YOUR PLAN BOOK

Add a page headed Plan Two, with the new plan, the old plan beside it, and one sentence of evidence for every change.

💬 TALK ABOUT IT

Show both plans, old and new, to somebody at home or at school and say what changed.

Is changing the plan admitting the first one was bad?



STUCK? TRY THIS

Read your difference column before you write anything. The new plan comes out of it, not out of your head.

★ CHALLENGE ZONE

Write a plan you are confident you can keep for four weeks with no changes. What did you have to do to be that confident, and did it cost you anything?

WEEK 25 COMING IN

Money Coming In

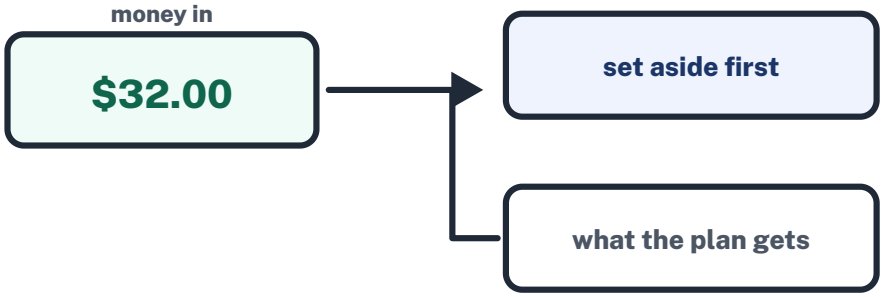
A plan has two sides. Everything so far has been the going-out one.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
$5 a week allowance, $12 from a job. Four weeks? _____

WORDS TO KEEP

coming in Money arriving. A plan needs this side as well as the spending side.



You cannot plan what you have not counted

Coming in over four weeks: $5.00 a week is $20.00, plus $12.00 once, is $32.00.

Until now every plan in this book started from an amount somebody handed you at the top of the page. Real plans start by working that amount out, and it usually comes from more than one place.

Two kinds arrive: the amount that turns up every week whether or not you do anything, and the amount that turns up because you did something. Both are money. They behave differently in a plan and week 26 is about that.

What is coming in?

	Every week	One-offs	Over 4 weeks
a	$5.00	$12.00	$32.00
b	$10.00	$0.00	
c	$2.50	$20.00	
d	$0.00	$40.00	
e	$7.00	$5.00	

Two rows come to the same over four weeks and would need very different plans. Which two, and what is different about planning them?

▶ ADD TO YOUR PLAN BOOK

Add a page headed Coming In: a four-week total, from a row above or your own, and where each part comes from. Nobody has to say which.

💬 TALK ABOUT IT

Make up four weeks of money coming in: one weekly amount and one one-off.

Which rows on this page arrive whether or not anybody does anything?



STUCK? TRY THIS

Multiply the weekly amount by four, then add the one-offs. Two steps, in that order.

★ CHALLENGE ZONE

Somebody gets $60 in one lump at the start of four weeks. Somebody else gets $15 a week. Same money. Write one advantage each of them has.

WEEK 26 COMING IN

When It Is Not the Same Every Time

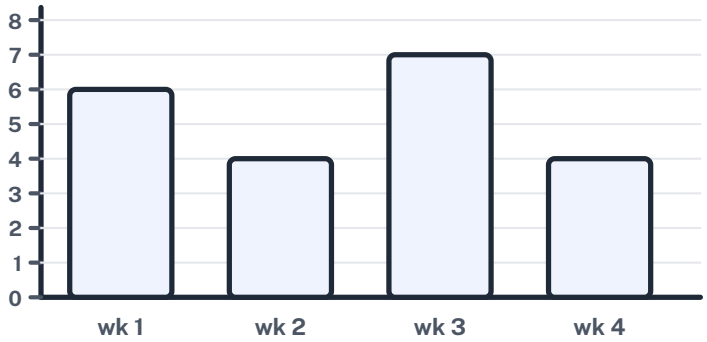
You cannot plan against a number that moves. So plan against the smallest one.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
Four weeks: $6, $4, $7, $4. What is the smallest? _____

WORDS TO KEEP

varies — Different each time. You cannot plan against a number that moves, so plan against the smallest one.



Plan against the low week

Four weeks of $6, $4, $7 and $4. That is $21.00 altogether, which is $5.25 a week on average, and there is not a single week where you got $5.25.

If you build a plan on $5.25 a week, it fails in weeks 2 and 4, and it fails for a reason that has nothing to do with how carefully you spent. The average was never in the room.

Build the plan on $4.00, the smallest. Then every week works, and the extra in a good week is a real decision you get to make rather than a hole you have to fill. That is the whole technique.

Which number would you plan on?

	The four weeks	Total	Average	Smallest
a	$6, $4, $7, $4	$21.00	$5.25	$4.00
b	$5, $5, $5, $5			
c	$10, $2, $2, $2			
d	$8, $6, $8, $6			
e	$3, $9, $3, $9			

In one row the average and the smallest are the same number. What does that tell you about that row, and why is it the easiest to plan?

TALK ABOUT IT

Show somebody at home or at school row c and explain why a plan built on its average fails. Is planning on the smallest week too careful? What does it cost you?



STUCK? TRY THIS

Add them for the total. Divide by four for the average. Then just look for the smallest.

★ CHALLENGE ZONE

Invent four weeks where the average is $6.00 and a plan built on the average would fail in three of the four weeks.

WEEK 27 COMING IN

A Rate, and What It Buys

What you earn each hour, times the hours, to the cent.

IN CLASS THIS WEEK
Multiplying, money with decimals (4.NBT.5, 4.MD.2)

MONEY WARM-UP · 2 MINUTES
$4.50 an hour for 3 hours is _____

WORDS TO KEEP

a rate An amount for each one. Each hour, each job, each week.



3 hours at $4.50

Multiply the rate, then compare it to a price

$4.50 an hour for 3 hours is $13.50. That is a multiplication with a decimal in it, and it works exactly like one without.

Counting weeks until you can afford something is one question. This asks a harder version: how many hours, at this rate. The answer is often not a whole number of hours, and a job does not usually let you work a third of one.

So you round up. Two and a half hours of work to afford it means three hours, because two gets you nearly there and nearly there does not buy anything.

Hours and money

	Rate	Hours	Earned	Hours to reach $27.00
a	$4.50	3	$13.50	6
b	$3.00	4		
c	$5.40	5		
d	$2.25	8		
e	$6.00	2		

In one row the hours needed do not come out whole. Which, and how many hours would you actually have to work?

TALK ABOUT IT

Make up a job you could do and a rate for it. What would three hours pay?

Is an hour of your time worth the same on a Saturday as on a school night?



STUCK? TRY THIS

Multiply the rate by the hours for what you earn. For the other column, count up in steps of the rate until you reach $27.00.

★ CHALLENGE ZONE

Two jobs: $5.00 an hour for 4 hours, or $18.00 for the whole job however long it takes. When is each one better? Say what you need to know first.

WEEK 28 THE UNPLANNED

Set Some Aside First

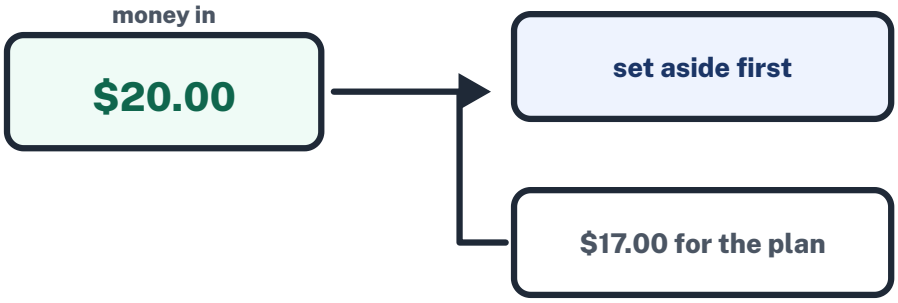
Take it off the top, before the plan is allowed to see it.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
$20.00 comes in. Set aside $3.00. The plan gets? _____

WORDS TO KEEP

set aside Take it out first, before the plan gets to spend it.



First, not last

$20.00 arrives. $3.00 goes straight into the set-aside. The plan is written for $17.00 and never knew about the other three.

The easy plan is to set aside whatever is left at the end. Very often nothing is left at the end. That is not a fact about you, it is about how spending fills whatever space it is given, and it is why week 8 said unassigned money gets spent.

So the set-aside is taken out first and the plan is built on the smaller number. The plan is tighter, which is the cost, and the cost is worth paying because week 23 is going to happen again.

Off the top

	Comes in	Set aside	The plan gets
a	$20.00	$3.00	$17.00
b	$12.00	$1.20	
c	$32.00	$4.50	
d	$8.00	$0.80	
e	$25.00	$5.00	

In two rows the set-aside is a tenth of what came in. Which two? In one row it is a fifth. Which?

▶ ADD TO YOUR PLAN BOOK

Add a page headed Set Aside First, with what comes in, what goes aside, and what the plan is written for.

💬 TALK ABOUT IT

Tell somebody at home or at school the difference between saving what is left and setting aside first.

Does setting aside first mean you spend less altogether, or the same?



STUCK? TRY THIS

Subtract the set-aside from what came in. Whatever is left is the whole amount the plan may use.

★ CHALLENGE ZONE

You want to set aside a tenth every week and your money varies: $6, $4, $7, $4. What do you set aside each week, and what does the plan get each week?

WEEK 29 THE UNPLANNED

How Big Should It Be?

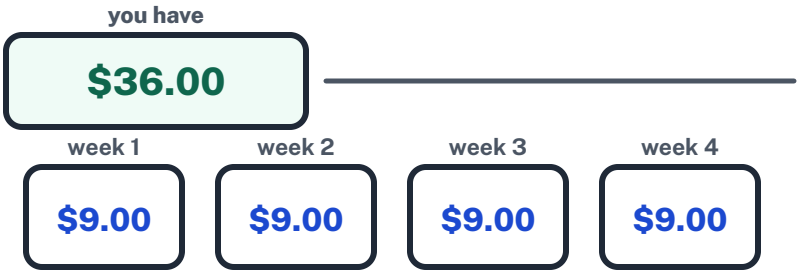
Sized against what a month of your plan costs, not against a feeling.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
Your plan is $9.00 a week. What does a month cost? _____

WORDS TO KEEP

how big The size of the set-aside, decided by what a month costs.



One month of your plan

A plan of $9.00 a week costs $36.00 for four weeks. A set-aside worth one month of your plan is $36.00.

Where does that number come from? It is a rule of thumb, and a rule of thumb is a decision somebody made that turned out to work often enough to keep. Here is one check on it: every surprise on the week 23 page costs less than $36.00, so a month of this plan would have covered any one of them.

At $3.00 a week set aside, reaching $36.00 takes twelve weeks. That is a long time and it is the honest answer. The set-aside is not a thing you have, it is a thing you build, and week 23 can arrive in week two.

Build the set-aside

	Plan each week	A month costs	Set aside each week	Weeks to get there
a	$9.00	$36.00	$3.00	12
b	$5.00		$2.00	
c	$12.00		$4.00	
d	$7.50		$2.50	
e	$10.00		$8.00	

Row e reaches the target fastest and is the least likely to actually happen. Say why, using the words from week 8.

TALK ABOUT IT

Work out what a month of your plan from week 24 costs. That is your target.

Is it better to build a small set-aside quickly or a big one slowly?



STUCK? TRY THIS

Multiply your weekly plan by four for the target. Then divide the target by what you set aside each week.

★ CHALLENGE ZONE

You set aside $2.00 a week and after 6 weeks something costs you $10.00 out of it. How many weeks from the start until you reach a month of $28.00?

WEEK 30 KEEPING TRACK

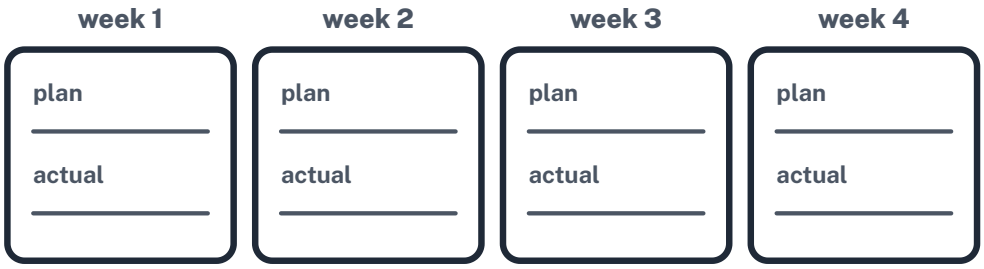
A Whole Month of Both Columns

Four weeks of plan and actual, kept properly, which is harder than one.

IN CLASS THIS WEEK
Adding and subtracting multi-digit (4.NBT.4)

MONEY WARM-UP · 2 MINUTES
Four weeks at $9.00 planned. Spent $8, $11, $9, $10. Total spent? _____

WORDS TO KEEP
the actual column What you really spent, written as it happens.



both columns, every week of the month

The month says something a week cannot

Planned $9.00 a week, so $36.00 for the month. Spent $8.00, $11.00, $9.00 and $10.00, which is $38.00. Two dollars over, across a month.

Look at what the weeks alone would have told you. Week 1 under, week 2 over by two, week 3 exact, week 4 over by one. Four separate small stories.

The month is one story, and it is the true one: this plan is about two dollars a month too small. You could not have known that from any single week, and knowing it changes the plan rather than your behavior.

The month, week by week

	Week	Planned	Actual	Difference
a	1	$9.00	$8.00	$1.00 under
b	2	$9.00	$11.00	
c	3	$9.00	$9.00	
d	4	$9.00	$10.00	
e	Month			

Add each column and fill in the Month row. Is the month difference the same as the four week differences added together? Check it.

▶ ADD TO YOUR PLAN BOOK

Add a page headed A Whole Month, with four weeks of both columns and the month totals underlined.

💬 TALK ABOUT IT

This month is the practice money from week 13. Which week would you have guessed was furthest over, before you added anything up?

Which is more useful to know, one week's difference or the month's?



STUCK? TRY THIS

Total each column down the page. The month difference is the two totals compared, and it should match the differences added up.

★ CHALLENGE ZONE

Invent a month where every single week is over plan and the month total is under. Is that possible? Say why.

WEEK 31 KEEPING TRACK

Where Did It Go?

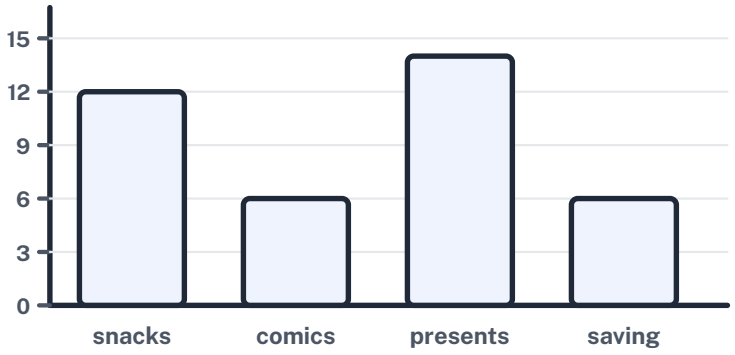
The month sorted by category, which answers a different question from the total.

IN CLASS THIS WEEK
Money problems (4.MD.2)

MONEY WARM-UP · 2 MINUTES
Snacks $12, comics $6, presents $14, saving $6. Largest? _____

WORDS TO KEEP

where it went The plan sorted by category after the fact, which is a different question from what it came to.



How much, and where

The month came to $38.00. That is one fact. Where it went is a completely different fact and the plan can only be fixed with the second one.

Drawn as bars, the month answers questions a column of numbers does not. Which is biggest, obviously. But also: are two of them nearly the same? Is one of them much bigger than all the others? Does the shape look like what you thought you were doing with your money?

That last question is the one worth asking out loud. If your bars surprise you, the surprise is the useful part.

Read your month

	Question	Your answer
a	Which category was biggest?	
b	Which was smallest?	
c	Are any two of them close to the same?	
d	Which surprised you?	
e	Does the biggest bar match what you care about most?	

In your Plan Book, draw the bars for what you **planned** next to the bars for what happened. Which pair is furthest apart?

▶ ADD TO YOUR PLAN BOOK

Add a page headed Where It Went, with your month drawn twice: planned bars and actual bars, side by side, same scale.

💬 TALK ABOUT IT

Show the two sets of bars to somebody at home or at school and let them ask one question. Would you want somebody else to see your bars? Why or why not?



STUCK? TRY THIS

One bar per category. Same scale for both sets, or the comparison is not a comparison.

★ CHALLENGE ZONE

Two people spend the same total in a month and their bars look nothing alike. Is one of them doing better? Say what you would need to know.

WEEK 32 COMPARING

Was the Plan Right?

Not: did you keep it. Whether the plan itself was the right plan.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
Planned $36.00, spent $38.00. Over by? _____

What for	Planned	Actual	Over or under
snacks	$8.00	$12.00	$4.00 over
comics	$8.00	$6.00	$2.00 under
presents	$12.00	$14.00	$2.00 over
saving	$8.00	$6.00	$2.00 under
Altogether	$36.00		

Two different questions people mix up

Did you keep the plan? Mostly not. Was the plan right? Also mostly not, and that is the more useful thing to find out.

Snacks was over by $4.00 across the month. Every week. That is not four failures of willpower, it is one wrong number: snacks needed $12.00 and was given $8.00. A category that is over every single week was measured wrong.

Compare that with a category that was exact three weeks and $6.00 over once. That one is not a wrong number, that is one event, and the fix for it is the set-aside rather than a bigger category.

Wrong number, or one event?

	The pattern across four weeks	Wrong number or one event?	What you would change
a	over by $1 every week	wrong number	raise it by $1
b	exact, exact, exact, $6 over		
c	under by $2 every week		
d	over, under, over, under, ends level		
e	over by more each week than the week before		

Row d ends the month at exactly zero difference. Is that plan right? Say what is going on in it.

💬 TALK ABOUT IT

Explain to somebody at home or at school the difference between a wrong number and one event.

How many weeks do you need before you can say a category is the wrong size?



STUCK? TRY THIS

Look down the difference column for one category across four weeks. The pattern matters more than any one number.

★ CHALLENGE ZONE

A category is over by $1, $2, $3 and $4 in four weeks. What is happening, and what will week 5 be? Is raising the amount the right fix?

WEEK 33 THE PLAN

Change One Thing

One category, one reason, written down. Changing everything teaches you nothing.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
Snacks goes from $8 to $12. Something must fall by? _____

WORDS TO KEEP
change one thing Revise one category and say why. Changing everything teaches you nothing.

What for	Planned
snacks	$8.00
comics	$8.00
presents	$12.00
saving	$8.00
Altogether	**$36.00**

One change, and the money has to come from somewhere

Snacks needs $12.00 instead of $8.00. The month still has $36.00 in it. So $4.00 has to come out of another category, and you have to say which.

Change one thing at a time. If you change four categories at once and next month is better, you have no idea which change did it, and you have to run the whole month again to find out.

That idea comes back in later grades, and it is worth meeting here first, with your plan, where the only person the experiment is about is you.

Make the change balance

	Category raised	By	Category lowered	By	Does the total hold?
a	snacks	$4.00	comics	$4.00	yes
b	presents	$3.00	saving		
c	saving	$2.00	snacks		
d	comics	$5.00	presents		
e	snacks	$4.00	saving		

Row e takes it out of saving. That balances and it is not the same kind of change as the others. Say why in one sentence.

▶ ADD TO YOUR PLAN BOOK

Add a page headed One Change, with the category, the amount, where the money came from, and the reason.

💬 TALK ABOUT IT

Make one change to your plan and say the reason out loud to somebody at home or at school. When is it right to change more than one thing at once?



STUCK? TRY THIS

Whatever you add to one category, take from another. The total at the bottom does not move.

★ CHALLENGE ZONE

You want to raise snacks by $4 and you refuse to lower saving. What are your options? Is doing nothing one of them?

WEEK 34 THE PLAN

Months, Not Weeks

A goal far enough away that the unit changes, and the plan has to survive it.

IN CLASS THIS WEEK
Multi-step word problems, remainders (4.OA.3, 4.NBT.6)

MONEY WARM-UP · 2 MINUTES
$96.00 at $8.00 a month. How many months? _____

WORDS TO KEEP

months, not weeks A goal so far off that the unit changes.

$8.00 every month



12 of them

$96.00

Twelve months is not twelve weeks

$96.00, saving $8.00 a month, is twelve months. A year.

Counting in weeks gives answers you can hold: eight weeks, twenty-four weeks. This is a different size of thing and it deserves a different kind of respect. Twelve months is a whole school year and a summer.

Which is exactly why the arithmetic matters. A goal that takes a year is not a goal you can keep in your head. Written down, with the months checked off, it is possible. Not written down, it can stop in March without anybody ever deciding to stop.

How long, really?

	The goal	Saved each month	Months	Is that more than a year?
a	$96.00	$8.00	12	no, exactly a year
b	$60.00	$5.00		
c	$150.00	$10.00		
d	$45.00	$4.00		
e	$200.00	$25.00		

One row does not divide evenly. How many whole months, how much short, and what would you do in the last month?

▶ ADD TO YOUR PLAN BOOK

Add a page headed The Long One, with a goal, the monthly amount, the number of months, and twelve boxes to check off.

💬 TALK ABOUT IT

Name one thing you would want in a year. Work out the monthly amount.

What could go wrong over twelve months that would not go wrong over four weeks?



STUCK? TRY THIS

Divide the goal by the monthly amount. If it does not divide evenly, you need one more month than the whole number.

★ CHALLENGE ZONE

A goal is $150 and you can save $10 a month, but twice a year something takes $20 out of it. How long does it really take?

WEEK 35 REVIEW

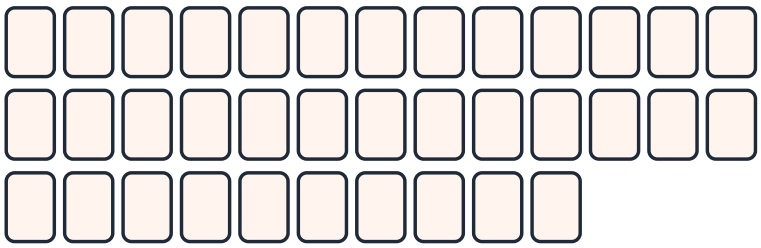
Your Plan Book, Finished

Every page of it written by you, over a whole school year.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
A plan of $9.00 a week, for 36 weeks. How much passed through it? _____

$9.00 every week



36 of them

What is in it

Go through the Plan Book from the front. It should be in order and every page should have numbers on it, your own or the practice money.

The first plan, written in week 5, before you had ever kept one. Your categories. The first plan column. The money coming in. The set-aside. The first month of both columns. The month drawn as bars, twice. The one change, with its reason.

Nobody else could have written it, which is the point, and it is also why it is worth keeping rather than handing in.

Check the book

	Question	Your answer
a	How many pages are in your Plan Book?	
b	Which page was hardest to fill in honestly?	
c	How much money passed through your plan this year?	
d	How many times did you change the plan?	
e	Which page would you show somebody first?	

If a page is missing, fill it in now from the workbook page it came from. A book with a gap in it is still a book.

▶ ADD TO YOUR PLAN BOOK

This is the last page. Number every page in the book, front to back, and write the total on this one.

💬 TALK ABOUT IT

Show one page you choose to somebody at home or at school.

Which page would you keep if you could only keep one?



STUCK? TRY THIS

Work from the front. Every page has a heading that came from a week, so any gap has a workbook page waiting to fill it.

★ CHALLENGE ZONE

If you kept this book for another year, what would you add to it that is not in it now?

WEEK 36 REVIEW

Decide It Before

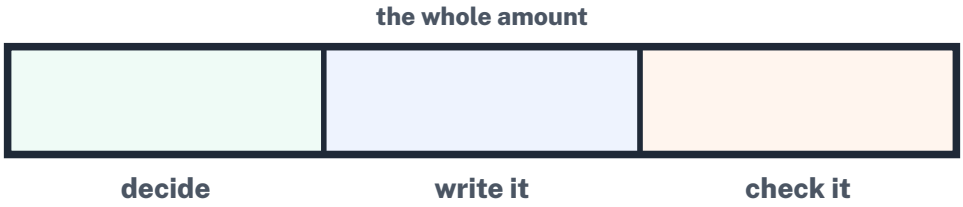
The whole year in three words, and what happens to them next year.

IN CLASS THIS WEEK
Multi-step word problems (4.OA.3)

MONEY WARM-UP · 2 MINUTES
You planned $36.00 and spent $34.50. Under by? _____

WORDS TO KEEP

decide it before The whole year in three words.



Three words, and why they are in that order

Decide it before. That is the year.

You may already know that choosing one thing means not having the other, and that this is true whether or not you notice. This year you moved the noticing earlier, to a table, before the store, where it is easier and nobody is waiting.

None of it works without the second column. A plan with no record beside it is a plan that is always right, and a plan that is always right has never told anybody anything. The checking is not the boring part after the planning. It is the part that makes the planning worth doing.

The last questions

	Question	Your answer
a	What is the one thing you would tell a younger student?	
b	What did your plan say about you that surprised you?	
c	Which was harder, making a plan or keeping the record?	
d	What would you plan for next, that you did not this year?	
e	Will you keep doing this? Say honestly.	

Row e is allowed to be no. If it is, say what would have to be different for it to be yes, and that is a more useful answer than a polite one.

TALK ABOUT IT

Tell somebody at home or at school the three words and what they mean.

What is one thing you now do differently with money?



STUCK? TRY THIS

There is no arithmetic on this page. Answer in sentences and take your time over row b.

★ CHALLENGE ZONE

Write the plan you would make for a whole year, in months rather than weeks. What is different about it, apart from the numbers?

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innovateyouth.org

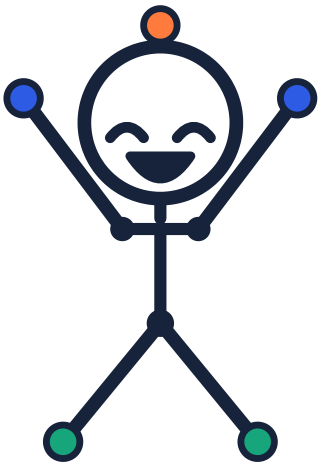
Grade 4 · The Planning Year

Certificate of Completion

This is to certify that

_____

practiced planning for thirty-six weeks: counting money to the cent, writing a plan before spending rather than after, keeping the record beside it, finding where a plan was wrong and changing one thing at a time, and setting money aside for what cannot be predicted.



_____ _____

Teacher Date

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