

Subtraction Within 100

Unit 5 Overview: 10 lessons

Students subtract two-digit numbers within 100 the way they added in Unit 4. They take away tens and count back by tens, jump back on an open number line, subtract the tens and the ones when there are enough ones, break apart the number they take away, and break a ten with blocks and quick drawings. Then they subtract in columns, count up and check by adding, subtract from 100 and from tens, and find missing numbers. Ask “Are there enough ones?” before every problem. Lesson 5.10 (estimate to check a difference) is for the states that teach it in 2nd grade.

THE UNIT, DAY BY DAY

Day 1	Pre-Check	What students already know (page 1 of the test pack).
Day 2	5.1 Subtract tens, count back by tens	I can take away tens and count back by tens.
Day 3	5.2 Subtract on an open number line	I can subtract on an open number line.
Day 4	5.3 Subtract by place value	I can subtract tens and ones.
Day 5	5.4 Break apart the number you take away	I can break apart the number I take away.
Day 6	5.5 Break a ten with blocks and drawings	I can break a ten to subtract.
Day 7	5.6 Subtract in columns with regrouping	I can subtract in columns and regroup.
Day 8	5.7 Count up to subtract, check by adding	I can count up to subtract and check by adding.
Day 9	5.8 Subtract from 100 and from tens	I can subtract from 100 and from tens.
Day 10	5.9 Missing numbers within 100	I can find a missing number.
Day 11	5.10 Estimate to check a difference ★	I can estimate to check a difference.
Day 12	Unit Review	The review pages, to go over together.
Day 13	Unit Test	Form A; Form B (other numbers) is for a retest.

★ Taught in 2nd grade in some states. Skip these lessons if yours teaches them in another grade; animalmath.com/standards shows your state’s list.

GET READY FOR THE UNIT

- Base-ten blocks (rods, unit cubes and a few hundred flats) and a tens and ones mat for each pair
- A hundreds chart and a hundred grid for each student, in a sheet protector to write on
- Blank open number lines (a long line with no marks)
- Whiteboards and dry erase markers

HOW EACH LESSON GOES

- 1. Warm up** (5 min)
 - 2. Teach** (10 min)
 - 3. Try it together** (10 min)
 - 4. Practice** (15 min)
 - 5. Exit ticket** (5 min): a quick check on the lesson.
- Each lesson page ends with the Animal Math sheets, makers, tools and quizzes for it. “Sheet 3” is the third worksheet of a pack; a color pack prints each sheet again in black and white.

CHECKING AS YOU GO

- EXIT TICKET**
- 2nd Grade Subtraction Within 100 Exit Tickets:** one for every lesson, four to a page
- PRINTABLE**
- 2nd Grade Subtraction Within 100 Test:** the Pre-Check, the Unit Review and the Unit Test (Forms A and B), with keys



Subtraction Within 100

Lesson 5.1: Subtract tens, count back by tens

GOAL Students take tens away from a number by counting back by tens (93 – 30: 83, 73, 63): the tens digit goes down and the ones stay. They also take tens from tens and from 100 (100 – 20 = 80).

About 45 minutes

I can take away tens and count back by tens.

THE LESSON

- 1 Warm up** (5 min) Count back by tens from 98 to 68, then from 96 to 76, pointing up a column of the hundreds chart.
- 2 Teach** (10 min) Build 93 with 9 rods and 3 cubes. Take away 3 rods, counting back: 83, 73, 63. Write $93 - 30 = 63$ and circle the 3 ones in both numbers. Then show 100 as 10 rods and take away 2: 8 rods are left, so $100 - 20 = 80$. Write $10 - 2 = 8$ beside it.
Say: “When I take away tens, only the tens change. I count back one ten for each rod.”
- 3 Try it together** (10 min) Partners take turns: one says a number and some tens to take away, the other counts back aloud, and both check on the chart, moving up a row for each ten. Include $100 - 60$ and $97 - 50$.
- 4 Practice** (15 min) Students break apart and take away tens on sheet 5 of Adding and Subtracting Tens (1st grade review). Early finishers count on and back by tens on sheet 4 of Ten More and Ten Less.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.1** and circle a face beside the “I can” line. Look for 73 for $76 - 30$: they took away 3 ones, not 3 tens. In the rows, 53, 52 means they counted back by ones.

Need help? Keep blocks on the desk: build the number, take away rods one at a time, and say the new number each time.

Ready for more? Find the missing tens: $84 - \underline{\quad} = 44$ and $100 - \underline{\quad} = 20$.

GET READY

- Base-ten blocks for each pair
- A hundreds chart for each student
- Whiteboards and markers

WORDS TO USE

count back by tens: say 10 less each time: 93, 83, 73

take away: remove some; what is left is the answer

10 tens: one hundred

ASK

- What is 10 less than 92? How do you know?
- Which digit changes when you take away 30?
- How does $10 - 2$ help with $100 - 20$?

WATCH FOR

Takes away ones: $93 - 30 = 90$. Read 30 as 3 tens and take away 3 rods, not 3 cubes.

Counts back by ones. Put a finger on the number on the chart and move up one row for each ten.

Gets stuck on 100 – 60. Think of 100 as 10 tens: 10 tens take away 6 tens is 4 tens.

ON ANIMAL MATH

PRINTABLE Adding and Subtracting Tens: sheet 5, for review

PRINTABLE Ten More and Ten Less: sheet 4, for early finishers

MAKER Horizontal Math Equations: Operations –, Range Within 100, Tens Only, Numbers Second Number ($34 + 20$)

TOOL Hundreds Chart: Click a Number To: See 10 More and 10 Less

QUIZ Add and Subtract Within 100 Quiz: the Tens level

EXIT TICKET 2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.1



Subtraction Within 100

Lesson 5.2: Subtract on an open number line

GOAL

Students subtract on an open number line: they start at the first number and jump back the tens, then the ones ($93 - 28$: 83, 73, then back 8 to 65), and see that hopping up from 28 to 93 gives the same answer.

About 45 minutes

I can subtract on an open number line.

THE LESSON

- 1 Warm up** (5 min) Count back by tens from 93 to 63, then back by ones from 73 to 65. Ask how many ones we counted back.
- 2 Teach** (10 min) Draw a line with a dot at 93 near the right end. To take away 28, jump back 10 to 83 and 10 more to 73: the 2 tens. Then jump back 8 to 65. Write -10 , -10 and -8 over the jumps and $93 - 28 = 65$. Then hop up from 28 instead: 2 to 30, 60 to 90, 3 to 93. The hops make 65 too.
Say: "I start at the first number and jump back the tens, then the ones. Or I hop up from the number I take away."
- 3 Try it together** (10 min) Partners draw $86 - 32$, $62 - 29$ and $91 - 45$ on blank lines, jumping back, then check one by hopping up. Then draw a line with the jumps already on it (back 10, back 10, back 4 from 81) and ask what it shows.
- 4 Practice** (15 min) Students jump back by tens and then the ones on sheet 3 of 2-Digit Subtraction Strategies. Students who are not ready to draw their own line start with a Number Line maker sheet.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.2** and circle a face beside the "I can" line. On question 2, the number taken away is 26 ($10 + 10 + 6$); look for 3, the number of jumps. On question 1, jumps to the right mean they added.

Need help? Use a number line marked by ones from 60 to 100 first, then make the same jumps on an open line.

Ready for more? Take away 29 by jumping back 30 and up 1, or solve $65 - 38$ both ways and tell which was faster.

GET READY

- Blank open number lines for each student
- A floor number line
- Whiteboards and markers

WORDS TO USE

jump back: a hop to the left, taking away

hop up: count up from the number you take away

difference: the answer when you subtract

ASK

- Where do you start? Which way do you jump?
- How many jumps of ten for 28?
- How can hopping up check your answer?

WATCH FOR

Jumps to the right. Taking away makes the number smaller: jump back, to the left.

Jumps back 28 ones one at a time. Say the tens first: 28 is 2 tens and 8 ones, so two jumps of ten, then 8.

Writes the last jump as the answer (8). The answer is where you land, 65, not the size of a jump.

ON ANIMAL MATH

PRINTABLE

2-Digit Subtraction Strategies: sheet 3

MAKER

Number Line: Mode Subtraction on Number Line, Number Range 1 to 100

TOOL

Number Line: Start 60, End 100, then Jump

QUIZ

Subtraction Within 100 Quiz: the Strategies level

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.2

Subtraction Within 100

Lesson 5.3: Subtract by place value

GOAL Students subtract two-digit numbers when there are enough ones: tens from tens and ones from ones, then put them together ($89 - 42$: $80 - 40 = 40$, $9 - 2 = 7$, so 47).

About 45 minutes

I can subtract tens and ones.

THE LESSON

- 1 Warm up** (5 min) Facts on whiteboards: $8 - 4$, $6 - 3$, $7 - 1$. Then the same facts in tens: $80 - 40$, $60 - 30$, $50 - 10$.
 - 2 Teach** (10 min) Build 89 on a mat. Ask: are there enough ones to take away 2? Yes, 9 ones. Take away 4 rods ($80 - 40 = 40$), then 2 cubes ($9 - 2 = 7$). 4 rods and 7 cubes are left, 47. Fill in the tens, ones and total rows on the chart.
- Say:** "I take the tens from the tens and the ones from the ones. Then I put them together."
- 3 Try it together** (10 min) Partners do $79 - 43$, $57 - 32$ and $95 - 61$ with the tens, ones and total rows, checking one with blocks. Include $47 - 27$, where the ones leave 0.
 - 4 Practice** (15 min) Students fill in the tens, the ones and the total on sheet 1 of 2-Digit Subtraction Strategies, then do a Column Math Equations maker sheet of two two-digit numbers with no ten to break. Early finishers write three subtractions with an answer of 32.
 - 5 Exit ticket** (5 min) Students do **Exit Ticket 5.3** and circle a face beside the "I can" line. Look for 4 on the tens line of $87 - 43$: the tens are $80 - 40 = 40$. On question 2, $76 - 52$ is $20 + 4$, then 24.

Need help? Build every problem and take the blocks away as you write each line.

Ready for more? Find the missing number: $86 - \underline{\quad} = 41$, or write a subtraction where the ones make 0.

GET READY

- Base-ten blocks and a mat for each pair
- A chart on the board with three rows: tens, ones, total
- Whiteboards and markers

WORDS TO USE

tens from tens: take the tens away from the tens

ones from ones: take the ones away from the ones

enough ones: at least as many ones as you take away

ASK

- Are there enough ones to take away?
- What is $80 - 40$? How does $8 - 4$ help?
- How can you check your answer by adding?

WATCH FOR

Writes $8 - 4 = 4$ on the tens line. Ask what the 8 in 89 is worth: 8 tens, 80. Write $80 - 40$.

Adds the ones: $9 + 2 = 11$. Read the sign aloud before each step: take away.

Writes 407 for 40 and 7. Say it: 40 and 7 more is 47. Build it with 4 rods and 7 cubes.

ON ANIMAL MATH

PRINTABLE

2-Digit Subtraction Strategies: sheet 1

MAKER

Column Math Equations: Operations $-$, Range Within 100, Set Digit Count, Digits 2 digits, Regrouping / Borrowing off

TOOL

Base Ten Blocks

QUIZ

Subtraction Within 100 Quiz: the No Regrouping level

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.3

Subtraction Within 100

Lesson 5.4: Break apart the number you take away

GOAL Students break apart the number they take away into its tens and its ones and take away one part at a time ($52 - 27$: $52 - 20 = 32$, then $32 - 7 = 25$).

About 45 minutes

I can break apart the number I take away.

THE LESSON

- 1 Warm up** (5 min) Break numbers apart aloud into tens and ones: 27 is 20 and 7, 45 is 40 and 5, 63 is 60 and 3.
- 2 Teach** (10 min) Write $52 - 27$ and draw a bond under 27: 20 and 7. Take away the 20: $52 - 20 = 32$. Then take away the 7: $32 - 7 = 25$. Show the same steps as jumps back on a line: back 20, then back 7. The 7 can be split too: $32 - 2 = 30$, then $30 - 5 = 25$.
Say: "I break apart the number I take away into tens and ones. I take away the tens, then the ones."
- 3 Try it together** (10 min) Partners break apart and subtract $66 - 38$, $81 - 46$ and $73 - 24$, writing the bond and the two steps for each. Ask what is left after taking the tens each time.
- 4 Practice** (15 min) Students do sheets 1 and 2 of Decompose to Subtract, 2-Digit Guided, where the first part is filled in ($89 - 23$ is $89 - 20 - \square$; a tens number such as 30 is split as 20 and 10). Then sheet 1 of the Open set, where they write both parts. Early finishers solve $90 - 48$ two ways.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.4** and circle a face beside the "I can" line. Question 1 asks for 25 as tens and ones, 20 and 5. In question 2, the box is 8, the ones of 28; look for 28 or 20: they did not split 28 into 20 and 8.

Need help? Use the guided sheets and a number line to jump back each part.

Ready for more? Break apart the number taken away another way (27 as 25 and 2), or solve $100 - 48$ by breaking apart.

GET READY

- Blank open number lines
- Base-ten blocks for each pair
- Whiteboards and markers

WORDS TO USE

break apart: split a number into parts: 27 is 20 and 7

number bond: a picture of a number and its parts

one part at a time: the tens first, then the ones

ASK

- What are the parts of 27?
- What is left after you take away 20?
- Why take the tens first?

WATCH FOR

Breaks apart the first number: 52 is 50 and 2.

Point to the number after the minus sign: that is the one to break apart.

Takes away the tens and stops: $52 - 27 = 32$.

Check the bond: the 7 is still to take away.

Adds the 7 back: $32 + 7 = 39$. Both parts are taken away. Say "take away 20, then take away 7."

ON ANIMAL MATH

PRINTABLE **Decompose to Subtract - 2-Digit Guided:** sheets 1-2

PRINTABLE **Decompose to Subtract - 2-Digit Open:** sheet 1

MAKER **Decompose to Subtract:** Digit Mode 2-Digit, Decomposition Style Guided (One Part Pre-Filled), then Open-Ended (All Blanks)

TOOL **Number Line:** Start 20, End 80, then Jump

QUIZ **Subtraction Within 100 Quiz:** the Strategies level

EXIT TICKET **2nd Grade Subtraction Within 100 Exit Tickets:** Exit Ticket 5.4

Subtraction Within 100

Lesson 5.5: Break a ten with blocks and drawings

GOAL Students subtract when there are not enough ones: they break a ten into 10 ones, then cross out ($62 - 37$: 62 is 5 tens 12 ones; take away 3 tens 7 ones; 25 is left), with blocks and with quick drawings.

About 45 minutes

I can break a ten to subtract.

THE LESSON

- 1 Warm up** (5 min) Show 4 rods and 3 cubes. Break one rod into 10 cubes: how many tens and ones now? (3 tens 13 ones, still 43.) Repeat with 61.
- 2 Teach** (10 min) Build 62 and ask: can we take 7 ones from 2 ones? No, so break a ten: 5 tens 12 ones. Take away 3 rods and 7 cubes: 2 rods and 5 cubes are left, 25. Then do $43 - 18$ as a quick drawing: 4 sticks and 3 circles; cross out a stick and draw 10 circles; cross out 1 stick and 8 circles; 25 is left.
Say: "If there are not enough ones, I break a ten into 10 ones. Then I take away."
- 3 Try it together** (10 min) Partners build and break a ten for $61 - 32$, $77 - 29$ and $50 - 16$, then do $82 - 47$ with a quick drawing only. Mix in $68 - 34$, where no ten needs breaking, and ask how they can tell.
- 4 Practice** (15 min) Students trade a ten and cross out on sheet 2 of 2-Digit Subtraction Strategies. Early finishers do a Base-ten Values maker sheet of numbers shown two ways (5 tens 3 ones = 4 tens 13 ones).
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.5** and circle a face beside the "I can" line. In question 2, 44 means they took 4 from 8 in the ones, and 46 means they broke a ten but kept it.

Need help? Use blocks for every problem and say the trade aloud: 6 tens 2 ones is 5 tens 12 ones.

Ready for more? Subtract from a ten with no ones ($70 - 38$), or draw 63 two ways, 6 tens 3 ones and 5 tens 13 ones.

GET READY

- Base-ten blocks and a mat for each pair
- Whiteboards and markers
- A chart: a stick is a ten, a circle a one

WORDS TO USE

break a ten: trade 1 ten for 10 ones

enough ones: as many ones as you take away

cross out: mark what you take away

ASK

- Are there enough ones to take away?
- After you break a ten, how many tens and ones?
- Is 5 tens 12 ones the same as 62?

WATCH FOR

Takes the smaller ones from the bigger:

$62 - 37 = 35$. Read from the top: 2 ones take away 7 ones. Not enough, so break a ten.

Breaks a ten but keeps all the tens. Count the rods after the trade: one rod is now 10 cubes.

Breaks a ten when there are enough ones. Ask "Are there enough ones?" first.

ON ANIMAL MATH

PRINTABLE

2-Digit Subtraction Strategies: sheet 2

MAKER

Base-ten Values: Mode Many Ways, Number Range 10 to 100

TOOL

Base Ten Blocks: select a ten and press Break Apart

QUIZ

Subtraction Within 100 Quiz: the Regrouping level

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.5

Subtraction Within 100

Lesson 5.6: Subtract in columns with regrouping

GOAL Students subtract in columns: they start with the ones, and when there are not enough ones they trade a ten, crossing out the tens digit to write one less and writing the new ones ($65 - 28$: 5 tens 15 ones; $15 - 8 = 7$, $5 - 2 = 3$; 37).

About 45 minutes

I can subtract in columns and regroup.

THE LESSON

- 1 Warm up** (5 min) Show $65 - 21$, $65 - 28$ and $65 - 25$. Students say which needs a ten traded and why.
- 2 Teach** (10 min) Write $65 - 28$ in a column and build 65. Start with the ones: 5 take away 8? Not enough. Trade a ten: cross out the 6 and write 5, cross out the 5 and write 15. Now $15 - 8 = 7$ and $5 - 2 = 3$. The answer is 37. Check by adding: $37 + 28 = 65$.
Say: "I start with the ones. If there are not enough ones, I trade a ten. Then I subtract."
- 3 Try it together** (10 min) Partners do $72 - 35$, $90 - 45$, $58 - 23$ and $81 - 63$ on whiteboards, building the first one. Before each, they say whether a ten needs to be traded.
- 4 Practice** (15 min) Students do a Column Math Equations maker sheet where every problem takes a two-digit number from a two-digit number and needs a ten traded. Then they do the subtraction problems on sheet 2 of Column Math to 100, saying first which need a trade: $90 - 15$, $73 - 34$ and $72 - 8$ do.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.6** and circle a face beside the "I can" line. Look for the crossed-out tens and the new ones over $83 - 47$ and $92 - 65$, and none over $65 - 24$. A 44 for $83 - 47$ means they took 3 from 7.

Need help? Build each problem next to the column and make the trade with blocks before writing anything.

Ready for more? Write a subtraction that needs a trade and has the answer 27, or find the mistake in $73 - 39 = 46$.

GET READY

- Base-ten blocks and a mat for each pair
- Grid paper or a tens and ones column chart
- Whiteboards and markers

WORDS TO USE

regroup: trade a ten for 10 ones

column: tens over tens, ones over ones

cross out: a line through a digit, its new value above

ASK

- Are there enough ones?
- What did you cross out? What did you write?
- How can you check your answer?

WATCH FOR

Takes the smaller digit from the bigger:

$65 - 28 = 43$. Read the ones from the top: 5 take away 8. Not enough, so trade a ten.

Writes 15 over the ones but keeps the 6 tens.

The 10 ones came from a ten: cross out the 6 and write 5.

In $60 - 28$, writes 10 ones but takes 8 from 0.

Use the new ones: $10 - 8 = 2$.

ON ANIMAL MATH

MAKER

Column Math Equations: Operations –, Range Within 100, Set Digit Count, Digits 2 digits, Regrouping / Borrowing on, Mix All

PRINTABLE

Column Math to 100: the subtraction problems on sheet 2

TOOL

Base Ten Blocks: select a ten and press Break Apart

QUIZ

Subtraction Within 100 Quiz: the Regrouping level

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.6

Subtraction Within 100

Lesson 5.7: Count up to subtract, check by adding

GOAL Students subtract by counting up from the number they take away: to the next ten, then by tens, then the ones ($62 - 47$: 3 to 50, 10 to 60, 2 to 62; $3 + 10 + 2 = 15$), and check by adding ($15 + 47 = 62$).

About 45 minutes

I can count up to subtract and check by adding.

THE LESSON

- 1 Warm up** (5 min) How far to the next ten? 47 (3), 28 (2), 64 (6). Then: how far from 40 to 80? (40.)
- 2 Teach** (10 min) Write $62 - 47$ and ask: 47 plus what makes 62? Put 47 at the left of a line and hop up: 3 to 50, 10 to 60, 2 to 62. Add the hops: $3 + 10 + 2 = 15$. So $62 - 47 = 15$. Check: $15 + 47 = 62$.
Say: "I start at the number I take away and count up. The hops add up to the answer. Then I check by adding."
- 3 Try it together** (10 min) Partners count up for $53 - 28$, $84 - 56$ and $85 - 47$, then check each by adding. Ask when counting up is easier than jumping back (when the numbers are close, like $61 - 58$).
- 4 Practice** (15 min) Students count up, add the jumps and check by adding on sheet 4 of 2-Digit Subtraction Strategies. Early finishers solve $90 - 64$ by counting up and by breaking a ten, and compare.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.7** and circle a face beside the "I can" line. On question 1 the hops are 3, 30 and 1, so 34; look for 33 or 35, a hop miscounted. On question 2, a check that does not give 63 means the answer is wrong.

Need help? Count up on a hundreds chart: to the next ten, then down rows of ten, then across.

Ready for more? Count up for $100 - 61$, or write a subtraction that is easiest to solve by counting up and tell why.

GET READY

- Blank open number lines for each student
- A hundreds chart for each student
- Whiteboards and markers

WORDS TO USE

count up: hop from the smaller number up to the bigger one

think addition: $47 +$ what makes 62? That is $62 - 47$

check: answer + number taken away = first number

ASK

- How far is it to the next ten?
- How many tens do you hop next?
- How do you check your answer by adding?

WATCH FOR

Adds the numbers under the line, not the hops. Circle the hops: only those add up to the answer.

Counts up from the bigger number. Start at the number you take away, the smaller one.

Checks by adding the two numbers in the problem. Add the answer to the number taken away: $15 + 47$ should give 62.

ON ANIMAL MATH

PRINTABLE

2-Digit Subtraction Strategies: sheet 4

TOOL

Number Line: Start 40, End 90, then Jump

TOOL

Hundreds Chart

QUIZ

Subtraction Within 100 Quiz: the Strategies level

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.7

Subtraction Within 100

Lesson 5.8: Subtract from 100 and from tens

GOAL Students subtract from 100 and from tens by counting up to the next ten and then by tens ($100 - 34$: 6 to 40, 60 to 100, so 66), or by trading a ten, and check by adding.

About 45 minutes

I can subtract from 100 and from tens.

THE LESSON

- 1 Warm up** (5 min) Tens that make 100: 20 and 80, 60 and 40. Then: what does 34 need to make 40?
- 2 Teach** (10 min) Write $100 - 34$. Count up from 34: 6 to 40, then 60 to 100, so 66. Check: $66 + 34 = 100$. Then write $80 - 28$ in a column: there are 0 ones, so trade a ten, 7 tens 10 ones; $10 - 8 = 2$ and $7 - 2 = 5$, so 52. Show the mistake $80 - 28 = 68$ and ask what went wrong.
Say: "From 100 or from tens, I count up to the next ten, then by tens. I check by adding."
- 3 Try it together** (10 min) Partners solve $100 - 57$, $60 - 27$ and $90 - 34$, each a different way, and check by adding. Then they judge: is $70 - 23$ equal to 53 or 47?
- 4 Practice** (15 min) Students subtract from 100 and from tens, check by adding and find who is right on sheet 5 of 2-Digit Subtraction Strategies. Early finishers jump to the next ten and then by tens to 100 on sheet 3 of Make 100.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.8** and circle a face beside the "I can" line. In question 2, 57 means they took 0 from 7, and 53 means they traded a ten but kept it. A check that does not give 100 or 60 shows a wrong answer.

Need help? Shade the number on a hundred grid and count the empty squares, or break a hundred flat into tens.

Ready for more? Subtract from 100 in your head ($100 - 35$, $100 - 82$), or explain why $100 - 34$ and $99 - 33$ have the same answer.

GET READY

- Base-ten blocks with a hundred flat
- A hundred grid and a hundreds chart for each student
- Whiteboards and markers

WORDS TO USE

from 100: take away from one hundred, 10 tens

zero ones: 80 has no ones, so a ten must be traded

check: add the answer to the number taken away

ASK

- What does 34 need to make the next ten?
- Why trade a ten to take 8 ones from 80?
- How do you check by adding?

WATCH FOR

Writes $80 - 28 = 68$: takes 0 from 8. Read the ones from the top: 0 take away 8. There are no ones, so trade a ten.

Writes $100 - 34 = 76$. Check: $76 + 34$ is 110. The ones make 10, so the tens make 9.

Counts up and forgets the first hop to the ten. Write each hop as you make it, then add them all.

ON ANIMAL MATH

PRINTABLE

2-Digit Subtraction Strategies: sheet 5

PRINTABLE

Make 100: sheet 3, for early finishers

TOOL

Base Ten Blocks: add a hundred, select it and press Break Apart

TOOL

Hundreds Chart

QUIZ

Subtraction Within 100 Quiz: the Strategies level

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.8



Subtraction Within 100

Lesson 5.9: Missing numbers within 100

GOAL Students find a missing number anywhere in an addition or subtraction ($\square + 26 = 63$, $92 - \square = 47$, $\square - 41 = 25$) by finding the whole and the parts, and check by reading it back.

About 45 minutes

I can find a missing number.

THE LESSON

- 1 Warm up** (5 min) Facts with a box, said aloud: $9 + \square = 13$, $16 - \square = 8$, $\square - 3 = 8$.
- 2 Teach** (10 min) Write $\square + 26 = 63$. Is 63 a part or the whole? The whole, so the box is the other part: count up from 26 to 63 (4, 30, 3), 37. Read it back: $37 + 26 = 63$. Then $92 - \square = 47$: 92 is the whole, so count up from 47 to 92 (3, 40, 2), 45. Then $\square - 41 = 25$: the box is the whole, so add $25 + 41 = 66$.
Say: "To find a part, I subtract or count up. To find the whole, I add. Then I read it back to check."
- 3 Try it together** (10 min) Partners solve $44 + \square = 72$, $\square + 27 = 61$, $90 - \square = 54$ and $\square - 18 = 46$, and read each one back with the number in the box to check.
- 4 Practice** (15 min) Students fill in the blanks on sheets 1 and 2 of Fill in the Blank - Equations to 100, then a maker sheet with the blank in mixed places. Early finishers write a missing number problem for a partner, with the box first.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.9** and circle a face beside the "I can" line. In question 1, look for 113 for $\square + 38 = 75$: they added the two numbers. In question 2, 44 and 46 are the mistakes of taking 1 from 5 and keeping a traded ten.

Need help? Draw a number bond for each problem first and label the whole and the parts.

Ready for more? Write a story for $44 + \square = 72$, or find the missing number in $100 - \square = 31$.

GET READY

- Base-ten blocks for each pair
- Blank open number lines
- Whiteboards and markers

WORDS TO USE

missing number: the number in the box that makes it true

parts and whole: two parts make the whole: 26 and 37 make 63

true: both sides of the = are the same amount

ASK

- Is the number after the = the whole or a part?
- Will you add or subtract to find the box?
- How do you check your number?

WATCH FOR

Adds the two numbers every time. Read it back with that number in the box: is it true?

For $\square - 41 = 25$, subtracts $41 - 25$. The box is the whole here: add $25 + 41$.

Writes the answer after the = sign. Point to the box: that is the only number missing.

ON ANIMAL MATH

PRINTABLE

Fill in the Blank - Equations to 100: sheets 1-2

MAKER

Fill in the Blank Equations: Operations + and -, Range Within 100, Position Mixed

TOOL

Base Ten Blocks

QUIZ

Subtraction Within 100 Quiz: the Missing Numbers level

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.9



Subtraction Within 100

Lesson 5.10: Estimate to check a difference

GOAL Students estimate a difference by rounding each number to the nearest ten (81 – 38 is about $80 - 40 = 40$) and use the estimate to check whether an answer makes sense.
I can estimate to check a difference.

About 45 minutes
 ★ Taught in 2nd grade in some states

THE LESSON

- 1 Warm up** (5 min) Point to numbers on the line and ask which ten is closer: 72, 38, 91, 24.
- 2 Teach** (10 min) Write $81 - 38$. Round: 81 is closer to 80, and 38 is closer to 40. So $81 - 38$ is about $80 - 40 = 40$. Max says $81 - 38 = 57$. Is 57 close to 40? No: Max took 1 from 8 in the ones. The answer is 43, close to 40, so it makes sense.
Say: "I round each number to the nearest ten and subtract the tens. If the answer is close to my estimate, it makes sense."
- 3 Try it together** (10 min) Partners estimate $83 - 32$, $91 - 48$ and $64 - 22$, then check three answers on the board: $83 - 32 = 51$, $91 - 48 = 57$ and $64 - 22 = 42$. Which make sense?
- 4 Practice** (15 min) Students round and subtract on sheet 3 of Estimate to Add & Subtract, then estimate to check the sums and differences on sheet 4. Early finishers do a Rounding Numbers maker sheet.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 5.10** and circle a face beside the "I can" line. Look for 80 for 86: it is closer to 90. On question 2, 47 is close to the estimate 50, so the answer is yes.

Need help? Keep a number line marked by tens on the desk and round one number at a time.

Ready for more? Estimate to check the answer to a story problem, or find a difference whose estimate and answer are the same.

GET READY

- A 0 to 100 number line on the board, marked by tens
- Whiteboards and markers

WORDS TO USE

estimate: a number close to the answer, found in your head

round: use the closest ten: 38 rounds to 40

make sense: close to the estimate, so it could be right

ASK

- Which ten is 48 closer to?
- Is the answer close to your estimate?
- When can an estimate warn you about a mistake?

WATCH FOR

Rounds by dropping the ones: 48 to 40. Find 48 on the number line: is it closer to 40 or to 50?

Subtracts the rounded numbers the wrong way round: 40 – 80. Keep the order of the problem: the first number take away the second.

Thinks the estimate is the answer. An estimate is about the answer; work the exact answer too, then compare.

ON ANIMAL MATH

PRINTABLE

Estimate to Add & Subtract: sheets 3–4

MAKER

Rounding Numbers: Round to Nearest 10, Show Number Line Hint

TOOL

Number Line: Start 0, End 100, Interval 10

EXIT TICKET

2nd Grade Subtraction Within 100 Exit Tickets: Exit Ticket 5.10

