

Place Value to 1,000

Unit 2 Overview: 10 lessons

Students start from the 1st grade trade of ten ones for a ten and take it one place further: ten tens make a hundred. They count hundreds to 900, then read, build and write three-digit numbers in every form: base-ten blocks and quick drawings, a place value table, the value of each digit, a zero that holds a place, expanded form, standard form and number words. Base-ten blocks carry the whole unit, so keep flats, rods and cubes on the tables. Lesson 2.10 (one number shown many ways) 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	2.1 Trade ten ones for a ten	I can trade ten ones for a ten.
Day 3	2.2 Ten tens make a hundred	I can make a hundred from ten tens.
Day 4	2.3 Hundreds: 100, 200 ... 900	I can count by hundreds to 900.
Day 5	2.4 Hundreds, tens and ones with blocks	I can show hundreds, tens and ones.
Day 6	2.5 The value of each digit	I can tell what each digit is worth.
Day 7	2.6 Zero holds a place	I can use zero to hold a place.
Day 8	2.7 Expanded form	I can write a number in expanded form.
Day 9	2.8 Standard form from blocks and expanded form	I can write the number from its parts.
Day 10	2.9 Number words to 1,000	I can read and write number words.
Day 11	2.10 One number, many ways ★	I can show a number in more than one way.
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 for each pair: 5 flats, 20 rods and 20 unit cubes
- A place value mat (hundreds, tens, ones) and a whiteboard for each student
- Place value cards (100 to 900, 10 to 90, 1 to 9) that stack to make a number
- Number cards 100 to 999, and word cards for one to nineteen, twenty to ninety and hundred

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 Place Value to 1,000 Exit Tickets: one for every lesson, four to a page
PRINTABLE	2nd Grade Place Value to 1,000 Test: the Pre-Check, the Unit Review and the Unit Test (Forms A and B), with keys



Place Value to 1,000

Lesson 2.1: Trade ten ones for a ten

GOAL Students trade ten loose ones for one ten and name a group as tens and ones, so the same trade with ten tens makes sense in the next lesson.

About 45 minutes

I can trade ten ones for a ten.

THE LESSON

- 1 Warm up** (5 min) Show 4 rods and 3 cubes for a few seconds, then cover them. Students write the number on whiteboards. Uncover and count together: 10, 20, 30, 40, 41, 42, 43.
- 2 Teach** (10 min) Put 3 rods and 12 cubes on the mat and count it all: 10, 20, 30, 31 ... 42. Trade ten cubes for a rod: now 4 tens and 2 ones, still 42. Write 3 tens 12 ones = 4 tens 2 ones = 42. Then think of 6 tens 15 ones without blocks: the 15 ones hold a ten, so it is 7 tens 5 ones, 75.
Say: "When I have ten or more ones, I can trade ten of them for a ten. The amount does not change."
- 3 Try it together** (10 min) Pairs grab a handful of rods and more than 10 cubes, trade ten ones for a ten and write the tens, the ones and the number. Include 1 ten 18 ones (28), exactly 10 ones (3 tens 10 ones is 40) and 19 ones.
- 4 Practice** (15 min) Students circle groups of ten and trade ten ones on sheets 1 and 2 of Bundling Tens and Ones, then write the numbers for the blocks on sheet 1 of Base-Ten Blocks 10 to 100.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.1** and circle a face beside the "I can" line. The new tens and ones are 3 tens 5 ones. Writing 2 tens 15 ones means no trade was made; 2 tens 5 ones means the new ten was lost.

Need help? Work with numbers under 30, matching ten cubes against a rod before every trade.

Ready for more? Find the number for 3 tens 24 ones (two trades), or show 52 two different ways with rods and cubes.

GET READY

- Rods and 20 cubes for each pair
- A tens and ones mat for each student
- Whiteboards and markers

WORDS TO USE

ten: ten ones put together; one rod

ones: single cubes, not in a ten

trade: swap ten ones for one ten; the amount stays the same

ASK

- How many ones do you need to make a ten?
- You traded ten ones for a ten. Did the number change? How do you know?
- What is 5 tens 13 ones? How did you find it?

WATCH FOR

Writes 312 for 3 tens 12 ones. Build it and count: 10, 20, 30, then 31 to 42. The 12 ones hold a ten.

Trades but keeps the old number of tens. Move the new rod over to the tens and count the tens again.

Circles groups that are not ten. Lay the group beside a rod: ten cubes match one rod.

ON ANIMAL MATH

PRINTABLE

Bundling Tens and Ones: sheets 1-2

PRINTABLE

Base-Ten Blocks 10 to 100: sheet 1

MAKER

Base-ten Blocks Place Value: Number Range 10-100

TOOL

Base Ten Blocks: select ten ones and press Put Together

QUIZ

Place Value Quiz: the Tens and Ones level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.1

Place Value to 1,000

Lesson 2.2: Ten tens make a hundred

GOAL Students see 100 as a bundle of ten tens, called a hundred, and name more than ten tens as a hundred and some tens: 13 tens 5 ones is 1 hundred 3 tens 5 ones, 135.

About 45 minutes

I can make a hundred from ten tens.

THE LESSON

- 1 Warm up** (5 min) Count by tens to 100 while you lay down rods one at a time. At 100, ask how many rods are on the table.
- 2 Teach** (10 min) Lay 10 rods side by side and put a flat on top: they are the same size, so ten tens make one hundred. Then lay out 13 rods and 5 cubes. Circle 10 rods and trade them for a flat: 1 hundred 3 tens 5 ones, 135. Fill in a place value table together. Last, count 16 rods by tens, 10, 20 ... 100, 110 ... 160: 16 tens is 160.
| **Say:** "Ten tens make one hundred. A flat is the same as ten rods."
- 3 Try it together** (10 min) Pairs build a number with 11 to 16 rods and some cubes, trade ten rods for a flat and say the hundreds, tens and ones. Then they break the flat back into ten rods and count by tens to check. Include one with no ones (15 tens is 150).
- 4 Practice** (15 min) Students circle ten tens to make a hundred and fill in the hundreds, tens, ones and the number on sheet 1 of Hundreds, Tens and Ones.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.2** and circle a face beside the "I can" line. The table should read 1, 2, 7 and 127. Writing 0, 12 and 7 means no trade was made; writing 14 for 14 tens means the tens were counted as ones.

Need help? Count rods by tens to 100 on a hundreds chart, covering one row with each rod.

Ready for more? How many tens are in 300? In 470? Build them to check.

GET READY

- Base-ten rods (at least 15), cubes and a flat for each pair
- A hundreds, tens and ones mat for each student
- Whiteboards and markers

WORDS TO USE

hundred: ten tens put together; one flat

flat: the square block; it is ten rods, or 100 cubes

ten tens: ten rods; they make 100

ASK

- How many tens are in 100? How do you know?
- Is a flat more than ten rods, less, or the same?
- What number is 17 tens?

WATCH FOR

Trades ten rods for a flat but keeps all 13 rods. Take the ten rods away when the flat comes in, then count the rods left: 3 tens.

Counts 13 rods as 13. Count the rods by tens out loud: 10, 20 ... 130.

Thinks ten ones make a hundred. Lay ten cubes beside a flat: they make a rod, not a hundred.

ON ANIMAL MATH

PRINTABLE **Hundreds, Tens and Ones:** sheet 1

TOOL

Base Ten Blocks: select ten tens and press Put Together; select a hundred and press Break Apart

QUIZ

Place Value to 1,000 Quiz: the Hundreds, Tens and Ones level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.2

Place Value to 1,000

Lesson 2.3: Hundreds: 100, 200 ... 900

GOAL Students count hundreds from 100 to 900 and know that 700 is 7 hundreds, 0 tens and 0 ones: the first digit tells how many hundreds.

About 45 minutes

I can count by hundreds to 900.

THE LESSON

- 1 Warm up** (5 min) Count by tens from 70 to 130 together, then by ones from 95 to 105. Ask what comes after 99.
- 2 Teach** (10 min) Lay flats on the board one at a time and count by hundreds: 1 hundred, 100; 2 hundreds, 200; up to 9 hundreds, 900. Write each one, such as 4 hundreds = 400. Point to 400: the 4 says four flats, and the two zeros say no tens and no ones. Then go the other way: write 700 and ask how many flats it takes.
Say: "Seven hundred is 7 hundreds. The 7 tells the hundreds, and the zeros say no tens and no ones."
- 3 Try it together** (10 min) Say a hundred number (300); partners build it with flats and write it. Then show flats and students write the number on whiteboards. Count by hundreds from 100 to 900 and back.
- 4 Practice** (15 min) Students count the flats, write the hundreds facts and count by hundreds on sheet 2 of Hundreds, Tens and Ones. Early finishers do a Three-Digit Place Value sheet made with Multiples of 10: numbers like 340 and 600, every one with 0 ones.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.3** and circle a face beside the "I can" line. Look at "200 = ____ hundreds": writing 200 again means the number was copied, not read as hundreds.

Need help? Count flats by hundreds to 500 only, touching each flat as they say its number.

Ready for more? Count on by hundreds from 250 (350, 450, 550) with flats and rods, or tell how many hundreds make 1,000.

GET READY

- Nine flats, or paper hundred squares, for the board
- Flats and a place value mat for each pair
- Whiteboards and markers

WORDS TO USE

hundreds: groups of one hundred, like flats

zero: none; the zeros in 700 say there are no tens and no ones

ASK

- How many hundreds are in 800?
- Why does 300 have two zeros?
- What comes after 400 when you count by hundreds?

WATCH FOR

Writes 4 or 40 for 4 hundreds. Count the flats by hundreds out loud: 100, 200, 300, 400. The last number said is the number.

Reads 400 as forty. Count the digits: three digits means hundreds. Build 40 and 400 side by side.

Writes 5100 for five hundred. Five hundred is 5 hundreds: a 5 in the hundreds place, then 0 tens and 0 ones.

ON ANIMAL MATH

PRINTABLE

Hundreds, Tens and Ones: sheet 2

MAKER

Three-Digit Place Value: Worksheet Type Write Hundreds, Tens, Ones, Number Range Multiples of 10 (it gives 100 to 990)

TOOL

Base Ten Blocks

QUIZ

Place Value to 1,000 Quiz: the Hundreds, Tens and Ones level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.3

Place Value to 1,000

Lesson 2.4: Hundreds, tens and ones with blocks

GOAL Students read three-digit numbers from base-ten blocks into a place value table, and build or draw a number from its digits: 436 is 4 hundreds, 3 tens and 6 ones.

About 45 minutes

I can show hundreds, tens and ones.

THE LESSON

- 1 Warm up** (5 min) Show 3 rods and 6 cubes for three seconds, then cover them; students write 36. Add a flat and show them again: now 136.
- 2 Teach** (10 min) Build 436 on the mat: 4 flats, 3 rods, 6 cubes. Write the digits in a place value table and read it: 4 hundreds, 3 tens, 6 ones, four hundred thirty-six. Then make a quick drawing of the same number: 4 squares, 3 sticks, 6 circles. Build 634 beside it: the same digits, a very different number.
Say: "The first digit tells the hundreds, the next tells the tens, and the last tells the ones."
- 3 Try it together** (10 min) Partner A pulls a number card and builds it; partner B fills in a place value table and makes a quick drawing. Switch. Include 152 and 125, and a number with 1 hundred (178).
- 4 Practice** (15 min) Students fill in the table for the blocks and make quick drawings on sheet 3 of Hundreds, Tens and Ones, then write the numbers on sheets 1 and 2 of Base-Ten Blocks 100 to 300.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.4** and circle a face beside the "I can" line. In the quick drawing of 241, look for 2 squares, 4 sticks and 1 circle. 24 sticks and 1 circle is also 241, but it does not use hundreds: ask for a square for each hundred.

Need help? Use numbers up to 300, building each one with blocks before writing it in the table.

Ready for more? Find every number you can build with exactly 4 blocks if at least one is a flat (400, 310, 301, 220 ...).

GET READY

- Base-ten blocks and a mat for each pair
- Number cards 100 to 999
- Whiteboards and markers

WORDS TO USE

place value table: a chart with a column for hundreds, tens and ones

quick drawing: a square for a hundred, a stick for a ten, a circle for a one

ASK

- How many hundreds are in 436? How many tens? How many ones?
- Why do 436 and 634 look so different in blocks?
- How would you draw 405 quickly?

WATCH FOR

Writes the digits in the order the blocks lie.

Sort the blocks onto the mat first: flats, rods, then cubes.

Counts each flat as 10. Lay ten rods on a flat and count them by tens to 100.

Draws every cube of a flat. In a quick drawing, one square stands for a whole hundred.

ON ANIMAL MATH

PRINTABLE

Hundreds, Tens and Ones: sheet 3

PRINTABLE

Base-Ten Blocks 100 to 300: sheets 1-2

MAKER

Three-Digit Place Value: Worksheet Type Build the Number, Number Range 100-999

TOOL

Base Ten Blocks: Advanced Options: Value columns

QUIZ

Place Value to 1,000 Quiz: the Hundreds, Tens and Ones level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.4

Place Value to 1,000

Lesson 2.5: The value of each digit

GOAL Students tell what each digit of a three-digit number is worth from its place: in 381 the 3 is worth 300, in 734 it is worth 30 and in 293 it is worth 3. **About 45 minutes**

I can tell what each digit is worth.

THE LESSON

- 1 Warm up** (5 min) Write 7, 70 and 700. Students tell how many cubes, rods or flats it takes to build each one.
- 2 Teach** (10 min) Write 381, 734 and 293 and underline the 3 in each. Build 381: the 3 is three flats, worth 300. In 734 the 3 is three rods, worth 30. In 293 it is three cubes, worth 3. Stack the place value cards for 381, then pull them apart: 300, 80, 1. The digit is the same; its place tells its value.
Say: "The place of a digit tells its value. The further left it sits, the more it is worth."
- 3 Try it together** (10 min) Write a number and point to a digit; students write its value on whiteboards. Then name a value (40) and the class writes a number where a 4 is worth 40. Include a number with the same digit twice (626) and ask about each 6.
- 4 Practice** (15 min) Students circle the place and write the value of each underlined digit on sheet 4 of Hundreds, Tens and Ones, then do sheet 1 of Three-Digit Place Value, Identify (Low).
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.5** and circle a face beside the "I can" line. In the circle question, 4 means the digit was read without its place; 400 means the 4 was taken for the hundreds digit.

Need help? Use place value cards with every number, pulling them apart to see each value.

Ready for more? Write the number where the 7 is worth 70, the 2 is worth 200 and the 9 is worth 9 (279), then make one for a partner.

GET READY

- Place value cards that stack to make a number
- Base-ten blocks for each pair
- Whiteboards and markers

WORDS TO USE

digit: one of the numerals 0 to 9 in a number

place: where a digit sits: hundreds, tens or ones

value: how much a digit is worth in its place

ASK

- What is the 8 worth in 482? In 248?
- Why is the 3 in 381 worth more than the 3 in 734?
- Can you make a number where 6 is worth 600?

WATCH FOR

Writes 3 for the value of the 3 in 381. Build 381 and point to the three flats: how many cubes do they hold?

Writes 30 for the 3 in 293. Name the places from the right: ones, tens, hundreds. The 3 is in the ones place.

Writes 8 for the value of the 8 in 381. Pull the place value cards apart: the 8 card says 80.

ON ANIMAL MATH

PRINTABLE

Hundreds, Tens and Ones: sheet 4

PRINTABLE

Three-Digit Place Value - Identify (Low): sheet 1

MAKER

Three-Digit Place Value: Worksheet Type Identify the Place Value, Number Range 100-999

QUIZ

Place Value to 1,000 Quiz: the Digit Values level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.5

Place Value to 1,000

Lesson 2.6: Zero holds a place

GOAL Students read and write three-digit numbers with a zero in the tens or the ones, and see that the zero holds a place: 304, 340 and 34 are different numbers.

About 45 minutes

I can use zero to hold a place.

THE LESSON

- 1 Warm up** (5 min) Show 3 flats and 4 cubes, no rods. Students write the number on whiteboards; collect the answers (304, 34, 340) without saying which is right yet.
- 2 Teach** (10 min) Put the warm up blocks on the mat and fill in the place value table: 3 hundreds, 0 tens, 4 ones. The 0 says there are no rods, and it keeps the 3 in the hundreds place: 304. Without it, 34 is 3 tens 4 ones. Build 340 and 34 beside it to compare. Then write 7 hundreds 1 one: 701, with a 0 for the tens.
| Say: "Zero means none, but it still holds the place."
- 3 Try it together** (10 min) Say a number with a zero (407, 470, 740); partners build it and write it in a table. Then call out hundreds and ones only (6 hundreds 3 ones) and they write the number. Include one with zeros in both places (800).
- 4 Practice** (15 min) Students circle the number the blocks show and write numbers with a place left out on sheet 5 of Hundreds, Tens and Ones.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.6** and circle a face beside the "I can" line. Look at 5 hundreds 9 ones: 59 or 590 means the zero was left out or put in the wrong place.

Need help? Write every number in a place value table first, putting a 0 in any empty column.

Ready for more? Write every three-digit number made of one 4, one 8 and one 0, and put them in order (408, 480, 804, 840).

GET READY

- Base-ten blocks and a place value mat for each pair
- A place value table on the board
- Whiteboards and markers

WORDS TO USE

zero: none; it shows a place with nothing in it
hold a place: keep the other digits in their places, so 304 is not 34

ASK

- Why does 304 need a zero?
- How are 470 and 407 different? Build both.
- What digit is in the tens place of 701? Why?

WATCH FOR

Writes 71 for 7 hundreds 1 one. Write it in a place value table: the tens column cannot be empty, so it gets a 0.

Writes 7001 for 701. Build it with 7 flats and 1 cube, then read the table across: 7, 0, 1.

Reads 604 as sixty-four. Point to each place: 6 hundreds, 0 tens, 4 ones. Six hundred four.

ON ANIMAL MATH

PRINTABLE

Hundreds, Tens and Ones: sheet 5

MAKER

Three-Digit Place Value: Worksheet Type Write Hundreds, Tens, Ones, Number Range Multiples of 10

TOOL

Base Ten Blocks

QUIZ

Place Value to 1,000 Quiz: the Hundreds, Tens and Ones level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.6

Place Value to 1,000

Lesson 2.7: Expanded form

GOAL Students write a three-digit number as the sum of what its digits are worth ($538 = 500 + 30 + 8$), leaving out a place that holds a zero ($709 = 700 + 9$).

About 45 minutes

I can write a number in expanded form.

THE LESSON

- 1 Warm up** (5 min) Show 3 flats, 4 rods and 6 cubes. Students write what each kind of block is worth: 300, 40, 6.
- 2 Teach** (10 min) Stack the place value cards 500, 30 and 8 to make 538, then pull them apart and write $538 = 500 + 30 + 8$. Do 709: the cards are 700 and 9, so $709 = 700 + 9$, with no tens card to write. Then $260 = 200 + 60$. Read each one aloud as the number.
- 3 Try it together** (10 min) Partners pull a hundreds, a tens and a ones card, stack them and write the number both ways. Then show a number with a zero and ask which cards make it. Include 480 and 408 side by side.
- 4 Practice** (15 min) Students write the number and its expanded form for blocks and numbers on sheet 1 of Expanded Form and Number Words, then do sheet 1 of Expanded and Standard Form 3 Digit.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.7** and circle a face beside the "I can" line. In the circle question, 300 + 6 for 360 means the tens were not read as tens; 3 + 6 means digits were added, not values.

Need help? Build each number with blocks and write one part for each kind of block before adding the plus signs.

Ready for more? Write a number in expanded form with its parts out of order ($6 + 100 + 50$) for a partner to solve.

GET READY

- Place value cards
- Base-ten blocks for each pair
- Whiteboards and markers

WORDS TO USE

expanded form: a number as its hundreds plus tens plus ones, like $500 + 30 + 8$

standard form: the number written the usual way, like 538

ASK

- What is 538 in expanded form? How do you know the 3 is 30?
- Why does 709 have only two parts?
- Which number is $800 + 40 + 1$?

WATCH FOR

Writes $5 + 3 + 8$ for 538. Build it: the 5 is five flats, and five flats are 500.

Is not sure what to write for the zero in 709. Zero tens add nothing: $700 + 9$ and $700 + 0 + 9$ both show 709.

Writes $53 + 8$ or $500 + 38$. Every digit gets its own part: one for the hundreds, one for the tens, one for the ones.

ON ANIMAL MATH

PRINTABLE Expanded Form and Number Words: sheet 1

PRINTABLE Expanded and Standard Form 3 Digit: sheet 1

MAKER Expanded Form: Mode Write in Expanded Form, Number Range 3-digit (100-999)

MAKER Base-ten Values: Mode Expanded Form, Number Range 100-300

QUIZ Place Value to 1,000 Quiz: the Expanded Form and Words level

EXIT TICKET 2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.7

Place Value to 1,000

Lesson 2.8: Standard form from blocks and expanded form

GOAL Students write the number for base-ten blocks and for an expanded form, even when the parts are out of order ($90 + 200 + 6 = 296$) or a place is missing ($600 + 8 = 608$).

About 45 minutes

I can write the number from its parts.

THE LESSON

- 1 **Warm up** (5 min) Read expanded forms aloud and students write the number: $200 + 40 + 6$, then $500 + 30 + 1$.
- 2 **Teach** (10 min) Write $90 + 200 + 6$. Sort the parts into their places: 200 is the hundreds, 90 the tens, 6 the ones, so the number is 296. Stack the place value cards to check. Then write $600 + 8$: there are no tens, so a 0 goes in the tens place, 608. Last, show 3 flats, 2 rods and 7 cubes mixed up on the table and write 327.
Say: "I put each part in its place: hundreds, tens, ones. If a place is missing, I write a zero."
- 3 **Try it together** (10 min) Call out expanded forms with the parts mixed up ($5 + 900 + 20$) or a place missing ($400 + 7$); students write the number on whiteboards. Then show blocks that are not sorted and students write the number.
- 4 **Practice** (15 min) Students write the numbers and find missing parts on sheet 2 of Expanded Form and Number Words, then do sheets 2 and 3 of Expanded and Standard Form 3 Digit.
- 5 **Exit ticket** (5 min) Students do **Exit Ticket 2.8** and circle a face beside the "I can" line. Look at $800 + 5$: an answer of 85 or 8005 means the zero was not used to hold the tens place.

Need help? Use place value cards for every problem, stacking them to see the number.

Ready for more? Find the missing part in $600 + \underline{\quad} + 2 = 642$, then write a puzzle like it for a partner.

GET READY

- Place value cards
- Base-ten blocks and a mat for each pair
- Whiteboards and markers

WORDS TO USE

standard form: a number written with digits the usual way, like 296

in any order: the parts can be added in any order and make the same number

ASK

- Does $90 + 200 + 6$ make the same number as $200 + 90 + 6$? Why?
- What goes in the tens place for $600 + 8$?
- Which number is $4 + 30 + 700$?

WATCH FOR

Writes 926 for $90 + 200 + 6$. Sort the parts by place first: hundreds, tens, ones.

Writes 68 for $600 + 8$. Put the number in a place value table: the empty tens place gets a 0.

Writes the parts side by side: 6008. Stack the place value cards: the 8 card covers the last 0 of the 600 card.

ON ANIMAL MATH

PRINTABLE

Expanded Form and Number Words: sheet 2

PRINTABLE

Expanded and Standard Form 3 Digit: sheets 2-3

MAKER

Expanded Form: Mode Write in Standard Form, Number Range 3-digit (100-999)

MAKER

Expanded Form: Mode Mixed Form Practice, Number Range 3-digit (100-999)

QUIZ

Place Value to 1,000 Quiz: the Expanded Form and Words level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.8

Place Value to 1,000

Lesson 2.9: Number words to 1,000

GOAL Students read and write number words to 1,000 by saying the hundreds and then the rest of the number (six hundred fifty-three), and match the words to the number.

About 45 minutes

I can read and write number words.

THE LESSON

- 1 Warm up** (5 min) Count by tens from 20 to 90 while pointing to each tens word on the word bank: twenty, thirty, forty and on.
- 2 Teach** (10 min) Write 653. Read it in two parts: the hundreds, six hundred, then the tens and ones, fifty-three. Write six hundred fifty-three. Show 807: eight hundred seven, with no word for the zero tens. Show 316: three hundred sixteen, a teen word after the hundreds. Build each one from the word cards.
Say: "I say the hundreds first, then the rest of the number, just like a two-digit number."
- 3 Try it together** (10 min) Pairs pull a number card and build its words from the word cards, then write them. Then read words aloud (seven hundred twelve) and students write the number. Include a number with zero tens (304) and one ending in a ten (860).
- 4 Practice** (15 min) Students write the numbers for the words on sheet 3 of Expanded Form and Number Words and write numbers in words on sheet 4, with the word bank card on the desk.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.9** and circle a face beside the "I can" line. For nine hundred four, 94 or 9004 means the zero tens were not written as a 0.

Need help? Write the number in a place value table first, then say each part as a word.

Ready for more? Write the words for 999 and 1,000, or write a page number or a street number in words.

GET READY

- Word cards: one to nineteen, twenty to ninety, and hundred
- Number cards 100 to 999
- A number word bank card for each student

WORDS TO USE

hundred: the word for the hundreds place; six hundred is 600

hyphen: the short line in fifty-three that joins a tens word and a ones word

ASK

- How do you write 316 in words?
- What number is two hundred six?
- Why is there no word for the zero in 807?

WATCH FOR

Writes 8007 for eight hundred seven. Write it in a place value table: 8 hundreds, 0 tens, 7 ones.

Writes forty or ninety. Keep the word bank card on the desk: forty and ninety are the tricky ones.

Writes six hundred thirty-five for 653. Say the tens first: 53 is 5 tens, fifty, and then three.

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PRINTABLE

Expanded Form and Number Words: sheets 3-4

MAKER

Base-ten Values: Mode Word Form, Number Range 100-300

QUIZ

Place Value to 1,000 Quiz: the Expanded Form and Words level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.9



Place Value to 1,000

Lesson 2.10: One number, many ways

GOAL Students show a three-digit number in more than one way by breaking a hundred into ten tens or a ten into ten ones (274 is 1 hundred 17 tens 4 ones, and 27 tens 4 ones), and see that the amount does not change.

I can show a number in more than one way.

About 45 minutes

★ Taught in 2nd grade in some states

THE LESSON

- 1 Warm up** (5 min) Show 1 ten and 14 ones. Students trade ten ones in their heads and write the number (24).
- 2 Teach** (10 min) Build 274 with 2 flats, 7 rods and 4 cubes. Break a flat into ten rods: 1 hundred 17 tens 4 ones. Count it: 100, then by tens to 270, then 274. Break a rod instead: 2 hundreds 6 tens 14 ones. Then break both flats: 27 tens 4 ones. Write the ways with = between them.
Say: "I broke a hundred into ten tens. It is the same number, with more tens."
- 3 Try it together** (10 min) Pairs build 245 and find as many ways as they can, writing each one as hundreds, tens and ones. Then write 3 hundreds 15 tens 2 ones on the board and ask what number it is (452).
- 4 Practice** (15 min) Students write the missing numbers and circle every way that shows the number on sheet 5 of Expanded Form and Number Words. Early finishers build each way to check.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 2.10** and circle a face beside the "I can" line. In 2 hundreds 13 tens 5 ones, 2135 means the parts were written side by side; 13 tens is 130.

Need help? Start with two-digit numbers (34 is 2 tens 14 ones), with real blocks that can be traded.

Ready for more? Find four ways to show 125 with flats, rods and cubes, and write each one.

GET READY

- Blocks with plenty of rods and cubes
- A place value mat for each student
- Whiteboards and markers

WORDS TO USE

break a hundred: trade one flat for ten rods

break a ten: trade one rod for ten cubes

same amount: the same number, even when the blocks look different

ASK

- Is 1 hundred 17 tens 4 ones more, less or the same as 274? How do you know?
- What happens to the tens when you break a hundred?
- How many tens are in 274 in all?

WATCH FOR

Breaks a hundred but keeps the old number of tens. Say "one hundred fewer, ten tens more" and count the rods again.

Writes 1174 for 1 hundred 17 tens 4 ones. Trade ten rods back for a flat and read the number: 274.

Thinks more blocks make a bigger number. Count both ways out loud: both end at 274.

ON ANIMAL MATH

PRINTABLE

Expanded Form and Number Words: sheet 5

MAKER

Base-ten Values: Mode Many Ways, Number Range 10-100, to start with two-digit numbers

TOOL

Base Ten Blocks: select a hundred and press Break Apart

QUIZ

Place Value to 1,000 Quiz: the Expanded Form and Words level

EXIT TICKET

2nd Grade Place Value to 1,000 Exit Tickets: Exit Ticket 2.10

