

Counting and Comparing

Unit 3 Overview: 10 lessons

With place value to 1,000 in hand, students count on and back past every hundred, skip count by 5s and 10s from any number, count by 100s, and count back by 10s and 100s. Then they read and place numbers on number lines to 1,000, compare three-digit numbers by their hundreds first, and put numbers in order. Keep a class number line from 0 to 1,000 on the wall for the whole unit. Lessons 3.4 (skip counting by 2s and 25s), 3.8 (number patterns), 3.9 (rounding to the nearest ten) and 3.10 (estimating how many) are for the states that teach them in 2nd grade.

THE UNIT, DAY BY DAY

Day 1	Pre-Check	What students already know (page 1 of the test pack).
Day 2	3.1 Count on past a hundred	I can count on and back past a hundred.
Day 3	3.2 Skip count by 5s and 10s	I can skip count by 5s and 10s.
Day 4	3.3 Count by 100s; count back by 10s and 100s	I can count by 100s and back by 10s and 100s.
Day 5	3.4 Skip count by 2s and 25s ★	I can skip count by 2s and 25s.
Day 6	3.5 Numbers on a number line to 1,000	I can find numbers on a number line.
Day 7	3.6 Compare with >, < and =	I can compare numbers with >, < and =.
Day 8	3.7 Order three or more numbers	I can put numbers in order.
Day 9	3.8 Number patterns ★	I can find the rule of a pattern.
Day 10	3.9 Round to the nearest ten ★	I can round to the nearest ten.
Day 11	3.10 Estimate how many ★	I can make an estimate that makes sense.
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

- A class number line from 0 to 1,000 marked by tens, and blank number lines on paper
- Base-ten blocks and a place value mat for each pair
- Number cards 100 to 999, and cards with >, < and = for each pair
- Quarters (real or paper), sheets of 100 stickers or stamps, and whiteboards and 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 Counting and Comparing to 1,000 Exit Tickets: one for every lesson, four to a page
PRINTABLE	2nd Grade Counting and Comparing to 1,000 Test: the Pre-Check, the Unit Review and the Unit Test (Forms A and B), with keys



Counting and Comparing

Lesson 3.1: Count on past a hundred

GOAL Students count on and back by ones across a hundred (898, 899, 900, 901 and 301, 300, 299) and name the numbers just before and just after a hundred.

About 45 minutes

I can count on and back past a hundred.

THE LESSON

- 1 Warm up** (5 min) Count on by ones from 95 to 105 together, then back from 105 to 95. Ask what comes after 99 and before 100.
- 2 Teach** (10 min) Count on from 897 on the class number line: 898, 899, 900, 901. At 899 the ones and the tens are full, so the next number is a new hundred: 900, not 8910. Then count back from 302: 301, 300, 299, 298. Last, name the numbers just before and just after 600: 599 and 601.
| **Say:** "After 9 tens and 9 ones comes a new hundred: 899, then 900."
- 3 Try it together** (10 min) Students stand in a line; give the first a start like 596 and each says the next number. Then count back from 703. On the 601 to 700 chart, count on from 689 past 700, off the end of the chart.
- 4 Practice** (15 min) Students fill in the number paths across a hundred on sheet 1 of Counting and Skip Counting to 1,000, then the 601 to 700 chart and the chart pieces on sheet 5.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.1** and circle a face beside the "I can" line. After 399, 300 means the hundreds did not go up and 3910 means 9 tens 10 ones was written as it is; after 500, 400 or 599 means the step back across the hundred is not yet sure.

Need help? Count across 100 and 200 first, on a number line with every number written.

Ready for more? Count back by ones from 1,000 to 990, or fill in a chart piece around 700.

GET READY

- The class number line
- A 601 to 700 chart for each student (sheet 5 of the practice pack)
- Whiteboards and markers

WORDS TO USE

count on: say the next numbers, one more each time

count back: say the numbers before, one less each time

just before, just after: 1 less and 1 more

ASK

- What comes after 299? How do you know?
- What number is just before 700?
- Where does the hundred change when you count back from 302?

WATCH FOR

Says 8910 after 899. Build 899 and add one cube: trade for a new ten, then ten tens for a new hundred.

Counts back 301, 300, 200. Say 1 less each time, and step back one mark on the number line: 299.

Skips the hundred: 898, 899, 901. Touch each mark on the number line while counting aloud.

ON ANIMAL MATH

PRINTABLE

Counting and Skip Counting to 1,000: sheets 1 and 5

MAKER

Skip Counting: Skip Count By 1s, Range 100 to 1000, Starting Number Any Number

TOOL

Number Line: Start 890, End 910, Interval 1, then Apply

QUIZ

Place Value to 1,000 Quiz: the Skip Counting level

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.1

Counting and Comparing

Lesson 3.2: Skip count by 5s and 10s

GOAL Students skip count by 5s and by 10s past a hundred, by 10s from any number (279, 289, 299, 309), and see that counting by 10s changes the tens and leaves the ones. **About 45 minutes**

I can skip count by 5s and 10s.

THE LESSON

- 1 Warm up** (5 min) Count by 5s to 100 and by 10s to 100 together, clapping on each number.
- 2 Teach** (10 min) Count by 5s from 585: 590, 595, 600, 605. The ones go 5, 0, 5, 0. Then count by 10s from 279: 289, 299, 309, 319. Only the tens change, and after 299 the tens are full, so the hundreds go up: 309. Write the counts on the board and circle the ones digits that stay the same.
Say: "When I count by 10s, the ones stay the same and the tens go up by one."
- 3 Try it together** (10 min) Give each pair a start and a step (347 by 10s, 590 or 285 by 5s). They write the next five numbers on a whiteboard and check with another pair. Include a count by 10s that crosses a hundred (583 to 623) and one by 5s (785 to 810).
- 4 Practice** (15 min) Students fill in the skip counting paths on sheet 2 of Counting and Skip Counting to 1,000. Students who need a step back start with sheets 2 to 4 of Fall Skip Counting (to 100).
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.2** and circle a face beside the "I can" line. In the 10s, 604 after 694 or 707 after 797 means the tens rolled over but the hundreds did not go up; 6104 or 7107 means ten tens were written as 10.

Need help? Count by 10s from any number on a hundreds chart, straight down a column, before going past 100.

Ready for more? Count back by 10s from 723 past 700, or count by 5s from 935 to 1,000.

GET READY

- A hundreds chart for each student
- The class number line
- Whiteboards and markers

WORDS TO USE

skip count: count by the same amount each time, like 5s or 10s

from any number: start where you are, not only at a number ending in 0

ASK

- What stays the same when you count by 10s from 279?
- What comes after 595 when you count by 5s?
- How is counting by 10s from 279 like counting by 10s from 79?

WATCH FOR

Writes 2109 after 299. Build 299 and add a rod: ten tens make a new hundred, 309.

Changes the ones when counting by 10s: 279, 280, 290. Circle the ones digit and keep it the same in every number.

Counts by 5s from 585 as 590, 600, 610. Say the ones out loud: 5, 0, 5, 0.

ON ANIMAL MATH

PRINTABLE

Counting and Skip Counting to 1,000: sheet 2

PRINTABLE

Fall Skip Counting: sheets 2-4

MAKER

Skip Counting: Skip Count By 10s, Range 100 to 1000, Starting Number Any Number

MAKER

Skip Counting: Skip Count By 5s, Range 100 to 1000, Starting Number Multiples

TOOL

Hundreds Chart: Skip Count Highlight 5s, then 10s

QUIZ

Place Value to 1,000 Quiz: the Skip Counting level

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.2

Counting and Comparing

Lesson 3.3: Count by 100s; count back by 10s and 100s

GOAL Students count on by 100s from any number (216, 316, 416), and count back by 10s and by 100s, across a hundred too (527, 517, 507, 497).

About 45 minutes

I can count by 100s and back by 10s and 100s.

THE LESSON

- 1 Warm up** (5 min) Count by 100s from 100 to 900 together, then back from 900 to 100.
- 2 Teach** (10 min) Build 216 and add a flat at a time: 316, 416, 516. Only the hundreds digit changes. Then build 537 and take away a rod at a time: 527, 517, 507. At 507 there are no rods left, so break a flat into ten rods to take one away: 497. Last, count back by 100s from 850: 750, 650, 550.
Say: "Counting back by 10s, the tens go down by one. When the tens run out, I break a hundred."
- 3 Try it together** (10 min) Call out a start and a step (by 100s from 265, back by 10s from 538, back by 100s from 970). The class writes the next three numbers on whiteboards. Include counting back by 10s past a hundred (321 to 291).
- 4 Practice** (15 min) Students fill in the paths on sheet 3 of Counting and Skip Counting to 1,000, then follow the arrows on sheet 2 of 10 and 100 More or Less.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.3** and circle a face beside the "I can" line. In the count back by 10s, 392 comes after 402: 492 means the tens went to 9 but the hundreds did not go down; 302 means 100 was taken away, not 10.

Need help? Count back by 10s inside one hundred first (78, 68, 58), with rods to take away.

Ready for more? Count back by 100s from 1,000 to 0, or by 10s from 1,000 to 900.

GET READY

- Base-ten flats and rods for each pair
- The class number line
- Whiteboards and markers

WORDS TO USE

count back: count down, the same amount less each time

100 more, 100 less: the hundreds digit goes up or down by one; the tens and ones stay

ASK

- What changes when you count by 100s? What stays the same?
- What is 10 less than 507? How do you know?
- What comes next: 850, 750, 650 ...?

WATCH FOR

Counts back by 10s from 507 as 407. Build 507: there are no rods, so break a flat into ten rods and take one away.

Changes the tens when counting by 100s: 216, 326. Add only a flat each time; the rods and cubes stay the same.

Counts back by 1s instead: 537, 536, 535. Say "10 less" for each step and take away a whole rod.

ON ANIMAL MATH

PRINTABLE

Counting and Skip Counting to 1,000: sheet 3

PRINTABLE

10 and 100 More or Less: sheet 2

TOOL

Number Line: Start 0, End 1000, Interval 100, then Jump to hop back

QUIZ

Add and Subtract Within 1,000 Quiz: the 10 and 100 More or Less level

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.3

Counting and Comparing

Lesson 3.4: Skip count by 2s and 25s

GOAL Students skip count by 2s past a hundred (496, 498, 500, 502) and by 25s (800, 825, 850, 875), and see that four 25s make 100.

I can skip count by 2s and 25s.

About 45 minutes

★ Taught in 2nd grade in some states

THE LESSON

- 1 Warm up** (5 min) Count by 2s to 20 with claps, then by 25s to 100 with quarters: 25, 50, 75, 100.
- 2 Teach** (10 min) Count by 2s from 496 on the class number line: 498, 500, 502, 504. The ones go 6, 8, 0, 2, 4, and the hundreds change at 500. Then count quarters by 25s: 25, 50, 75, 100, then on to 200. Start at 800: 825, 850, 875, 900. Every four 25s is another hundred.
| **Say:** "Four 25s make 100, just like four quarters make a dollar."
- 3 Try it together** (10 min) Pairs line up quarters and count them by 25s to 300. Then call out starts for 2s (194, 994) and for 25s (325, 900); the class writes the next three numbers.
- 4 Practice** (15 min) Students fill in the paths by 2s and by 25s on sheet 4 of Counting and Skip Counting to 1,000.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.4** and circle a face beside the "I can" line. In the 25s, look at the step after 575: anything but 600 means 75 and 25 making 100 is not yet known.

Need help? Count quarters by 25s to 100, then to 200, before starting from other numbers.

Ready for more? Count by 25s from 0 to 1,000 and tally how many 25s it takes (40).

GET READY

- About 12 quarters, real or paper, for each pair
- A hundreds chart for each student
- Whiteboards and markers

WORDS TO USE

by 2s: every other number: 2, 4, 6, 8

quarter: a coin worth 25 cents; four quarters make 100 cents

ASK

- What comes after 498 when you count by 2s?
- How many 25s make 100? How do you know?
- What comes after 975 when you count by 25s?

WATCH FOR

Counts by 2s from 498 as 4100. Count by 2s across 100 first (96, 98, 100, 102), then across 500 on the number line.

Counts by 25s as 25, 50, 75, 80. Line up quarters and count them: 75 and one more quarter is 100.

Writes 850 right after 800. Count the quarters one at a time out loud; each step is only 25.

ON ANIMAL MATH

PRINTABLE

Counting and Skip Counting to 1,000: sheet 4

MAKER

Skip Counting: Skip Count By 2s, Range 100 to 1000, Starting Number Multiples

TOOL

Money: add quarters and press Line Up and Count

TOOL

Hundreds Chart: Skip Count Highlight 2s

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.4

Counting and Comparing

Lesson 3.5: Numbers on a number line to 1,000

GOAL Students read and place numbers on number lines to 1,000 by first working out what each mark counts by: 1, 10 or 100.

About 45 minutes

I can find numbers on a number line.

THE LESSON

- 1 Warm up** (5 min) Count by 10s from 300 to 400, then by 100s from 0 to 1,000, together.
- 2 Teach** (10 min) Draw a line from 300 to 400 with only 300, 350 and 400 written. Count the jumps: ten jumps from 300 to 400, so each mark is 10 more. Point to the third mark after 300: 310, 320, 330. Then draw 0 to 1,000 with only 0, 500 and 1,000 written: each mark is 100. Place 400 and 600, and show that 600 is closer to 500 than to 1,000.
Say: "First I find what each mark counts by. Then I count the marks from a number I know."
- 3 Try it together** (10 min) Hand out the sticky notes; students place theirs on the class line and say what each mark counts by. Then draw a line from 340 to 350 by 1s with only the ends written, and place 343 and 348.
- 4 Practice** (15 min) Students write the number at each arrow on sheet 1 of Comparing 3-Digit Numbers and mark numbers with dots on sheet 2, then read the arrows and order the numbers on sheet 4 of Ordering Numbers to 1,000.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.5** and circle a face beside the "I can" line. On the 700 to 800 line, 702 for the first arrow means each mark was read as 1, not 10.

Need help? Work on a line from 0 to 100 by tens with every number written, then cover some numbers with sticky notes.

Ready for more? Place 250, 500 and 750 on a line from 0 to 1,000, or place 645 on a line from 600 to 700.

GET READY

- The class line and paper number lines
- Sticky notes with 310, 360, 400 and 600
- Whiteboards and markers

WORDS TO USE

number line: a line with evenly spaced marks in order

mark: a short line for a number

counts by: what each jump is worth: 1, 10 or 100

ASK

- What does each mark count by?
- Where would 450 go on a 0 to 1,000 line?
- Is 330 closer to 300 or to 350?

WATCH FOR

Reads every mark as one more: 301, 302. Count the jumps between two written numbers first: 10 jumps from 300 to 400 is 10 each.

Counts the first mark as the start number. Put a finger on 300 and say "zero jumps", then count each jump.

Puts 800 halfway between 500 and 1,000.

Count the marks after 500 by hundreds: 600, 700, 800.

ON ANIMAL MATH

PRINTABLE

Comparing 3-Digit Numbers: sheets 1-2

PRINTABLE

Ordering Numbers to 1,000: sheet 4

MAKER

Number Line: Mode Place the Number, Number Range 1-100, to warm up

TOOL

Number Line: Start 0, End 1000, Interval 100, then Point to place numbers

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.5

Counting and Comparing

Lesson 3.6: Compare with $>$, $<$ and $=$

GOAL Students compare three-digit numbers, hundreds first, then tens, then ones, and write $>$, $<$ or $=$ ($392 < 410$, $682 > 628$, $300 + 7 = 307$).

About 45 minutes

I can compare numbers with $>$, $<$ and $=$.

THE LESSON

- 1 Warm up** (5 min) Say two numbers, 45 and 54. Students hold up fingers for the tens of each, then say which number is greater.
- 2 Teach** (10 min) Write 392 and 410 in a place value table. Compare the hundreds first: 3 hundreds and 4 hundreds, so $392 < 410$, even though 392 has more tens and ones. Then 682 and 628: the hundreds are the same, so the tens decide, and $682 > 628$. Last, $300 + 7$ and 307: add the parts first, then compare: $300 + 7 = 307$.
Say: "I compare the hundreds first. If they are the same, I look at the tens, then the ones."
- 3 Try it together** (10 min) Partners pull two cards, build both and lay a sign card between them, then read the sentence aloud. Include the same hundreds (638 and 683), a smaller number with bigger tens and ones (399 and 401), and an equal pair in expanded form.
- 4 Practice** (15 min) Students write the numbers and signs for the blocks on sheet 3 of Comparing 3-Digit Numbers, circle the place that decides on sheet 4 and compare numbers in other forms on sheet 5.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.6** and circle a face beside the "I can" line. Check 491 and 503: writing $>$ means the tens and ones were compared before the hundreds.

Need help? Compare numbers with blocks on a place value mat, one number above the other.

Ready for more? Write three true sentences about 735, one with each sign, or compare 3 hundreds 12 tens with 4 hundreds 2 tens.

GET READY

- Base-ten blocks and a mat for each pair
- Number cards and $>$, $<$ and $=$ cards
- A place value table on the board

WORDS TO USE

greater than: the sign $>$; it opens to the greater number

less than: the sign $<$; it points to the smaller one

equal to: the sign $=$; both sides are the same

ASK

- Which place do you look at first? Why?
- How do you know 682 is greater than 628?
- Why is $300 + 7$ equal to 307?

WATCH FOR

Writes $392 > 410$ because 9 is more than 1. Cover the tens and ones and compare the hundreds first.

Turns the sign the wrong way. Read the sentence aloud from left to right; if it is not true, turn the sign.

Never writes $=$. Build an equal pair two ways: the same amount gets $=$.

ON ANIMAL MATH

PRINTABLE

Comparing 3-Digit Numbers: sheets 3-5

MAKER

Greater Than / Less Than: Number Range 0 to 1,000, Show Numbers As Numerals

TOOL

Base Ten Blocks

QUIZ

Comparing Numbers to 1,000 Quiz: the Compare level

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.6

Counting and Comparing

Lesson 3.7: Order three or more numbers

GOAL Students put three or four numbers to 1,000 in order from least to greatest or greatest to least, comparing the hundreds first and the tens and ones when the hundreds are the same.

About 45 minutes

I can put numbers in order.

THE LESSON

- 1 Warm up** (5 min) Four students hold 245, 425, 254 and 452. The class tells them how to stand from least to greatest.
- 2 Teach** (10 min) Write 472, 247, 427 and 274. Sort by hundreds first: 247 and 274 have 2 hundreds, 472 and 427 have 4. Inside each pair, the tens decide: $247 < 274$ and $427 < 472$. So $247 < 274 < 427 < 472$. Check on the class number line: the order is the order you meet them counting.
Say: "I find the least number first, then the next one, until all are in order."
- 3 Try it together** (10 min) Groups of four each pull a card and line up from least to greatest, then turn around for greatest to least. Include numbers with the same digits (409, 490, 904), a two-digit number among them (94) and a set with the same hundreds.
- 4 Practice** (15 min) Students order the blocks on sheet 1 of Ordering Numbers to 1,000 and the sets on sheets 2 and 3 (sheet 3 goes greatest to least), then order the numbers and answer the questions on sheet 5. Early finishers compare and order on sheet 5 of Comparing 3-Digit Numbers.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.7** and circle a face beside the "I can" line. The least is 246. Circling 264 means the ones were compared when the hundreds tied, not the tens; 624 means the tens were compared before the hundreds.

Need help? Order three numbers with different hundreds first, building each one with blocks.

Ready for more? Make every three-digit number from the digit cards 4, 0 and 7, and put them all in order.

GET READY

- Number cards 100 to 999
- The class number line
- Whiteboards and markers

WORDS TO USE

order: put in a line from least to greatest, or greatest to least

least: the smallest number

greatest: the biggest number

ASK

- Which number is the least? How do you know?
- Two numbers have 4 hundreds. How do you order them?
- Where does 94 go in 409, 490 and 94?

WATCH FOR

Orders by the ones digit: 472 before 274. Cover the tens and ones and sort by the hundreds first.

Puts 94 after 409 because 9 is a big digit.

Count the digits: a two-digit number has no hundreds, so it is less.

Writes the least first when the steps ask for the greatest first. Read the words under the blanks and point to where the greatest goes before starting.

ON ANIMAL MATH

PRINTABLE

Ordering Numbers to 1,000: sheets 1-3 and 5

PRINTABLE

Comparing 3-Digit Numbers: sheet 5

QUIZ

Comparing Numbers to 1,000 Quiz: the Order level

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.7

Counting and Comparing

Lesson 3.8: Number patterns

GOAL Students find the rule of a number pattern that adds or takes away the same amount each time (156, 163, 170 adds 7), and use the rule to fill in missing numbers.
I can find the rule of a pattern.

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

THE LESSON

- 1 Warm up** (5 min) Show 10, 20, 30, 40 and 90, 80, 70, 60. Students tell the rule of each: add 10, take away 10.
- 2 Teach** (10 min) Write 156, 163, ____, 177, _____. Find the rule from two numbers side by side: 156 to 163 is 7 more, so the rule is add 7. Fill in 170, check that 170 and 7 more is 177, then fill in 184. Then write 760, ____, 680, 640, ____: 680 to 640 is 40 less, so the rule is take away 40: 720 and 600.
Say: "I find the rule from two numbers side by side, then check it on the others."
- 3 Try it together** (10 min) Write a pattern on the board; pairs find the rule and the missing numbers on whiteboards. Include one that adds a small amount (3), one that takes away tens (30) and one with the first number missing.
- 4 Practice** (15 min) Students find the patterns on sheets 1 and 2 of Number Patterns, Mixed (Medium). Early finishers do sheet 1 of Number Patterns, Hard (bigger jumps, more blanks).
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.8** and circle a face beside the "I can" line. Check the rule as well as the numbers: filling in 925 but circling add means the numbers were found without the rule.

Need help? Start with patterns that add or take away 5 or 10, on a hundreds chart.

Ready for more? Make a pattern with a rule of your own and five numbers, two of them blank, for a partner.

GET READY

- A hundreds chart and a number line for each pair
- Patterns with blank boxes, written on the board
- Whiteboards and markers

WORDS TO USE

pattern: numbers that change the same way each time

rule: what the pattern does each time, like add 7 or take away 40

ASK

- How did you find the rule?
- Does the pattern go up or down? How can you tell?
- What would come after 600?

WATCH FOR

Finds the rule from two numbers that are not side by side. Point to two numbers next to each other, with no blank between them.

Adds when the pattern goes down. Ask first: are the numbers getting bigger or smaller?

Uses the rule once, then guesses. Check the rule between every pair of numbers that are given.

ON ANIMAL MATH

PRINTABLE

Number Patterns - Mixed (Medium): sheets 1-2

PRINTABLE

Number Patterns - Hard: sheet 1, for early finishers

MAKER

Number Patterns: Pattern Type Mixed, Difficulty Medium

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.8

Counting and Comparing

Lesson 3.9: Round to the nearest ten

GOAL Students round a number to the nearest ten by finding the two tens it is between on a number line and choosing the closer one (678 rounds to 680), rounding up when the ones digit is 5.

I can round to the nearest ten.

About 45 minutes

★ Taught in 2nd grade in some states

THE LESSON

- 1 Warm up** (5 min) Show 670 and 680 on a line. Students point to where 671, 675 and 679 would go.
- 2 Teach** (10 min) Draw a line from 670 to 680 and mark 678. Count the jumps: 8 back to 670 and 2 on to 680, so 678 rounds to 680. Then 243: it sits between 240 and 250 and is closer to 240. Show 896: the tens on each side are 890 and 900, and it is closer to 900. Last, 255 is halfway, and we round it up to 260.
Say: "I find the two tens, see which one is closer, and round to that ten."
- 3 Try it together** (10 min) Call out a number (288, 312, 596). Students write the two tens it is between on whiteboards, then circle the closer one. Include one that rounds up to a new hundred and one with 5 ones.
- 4 Practice** (15 min) Students round two-digit numbers on sheet 1 of Rounding to the Nearest 10, then three-digit numbers on a Rounding Numbers sheet made with Min 100 and Max 999. Early finishers do sheet 1 of Estimate to Add & Subtract.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.9** and circle a face beside the "I can" line. For 797, an answer of 790 or 7100 means rounding up across a hundred is not yet sure.

Need help? Round two-digit numbers on a line from 0 to 100 first, writing the two tens each time.

Ready for more? Find every number that rounds to 500 (495 to 504), or round the same numbers to the nearest hundred.

GET READY

- Number lines from 670 to 680 and from 240 to 250 for each pair
- The class number line
- Whiteboards and markers

WORDS TO USE

round: change a number to a nearby ten that is easy to work with

nearest ten: the ten that is closest

halfway: the middle, 5 ones; we round it up

ASK

- Which two tens is 243 between?
- Is 678 closer to 670 or to 680? How do you know?
- What does 896 round to? Why?

WATCH FOR

Rounds 243 to 250 because rounding goes up. Draw the line and count the jumps to each ten.

Rounds 896 to 8100. Count on by tens from 890: the next ten is 900.

Rounds to the nearest hundred instead. Write the two tens first: they end in 0 and are 10 apart.

ON ANIMAL MATH

PRINTABLE **Rounding to the Nearest 10:** sheet 1

PRINTABLE **Estimate to Add & Subtract:** sheet 1

PRINTABLE **Rounding to the Nearest 100:** for classes that also round to the nearest hundred

MAKER **Rounding Numbers:** Round to Nearest 10, Number Range Min 100 and Max 999

TOOL **Number Line:** Start 670, End 680, Interval 1, then Apply

EXIT TICKET **2nd Grade Counting and Comparing to 1,000 Exit Tickets:** Exit Ticket 3.9

Counting and Comparing

Lesson 3.10: Estimate how many

GOAL Students make an estimate that makes sense by using a group they know: a full sheet of 100 stamps shows that 5 sheets and a nearly full one is about 600, not 60 or 900.

About 45 minutes

★ Taught in 2nd grade in some states

I can make an estimate that makes sense.

THE LESSON

- 1 Warm up** (5 min) Show the jar of 100. Ask: is it nearer 10, 100 or 1,000? Then count it together by tens to check.
- 2 Teach** (10 min) Show 5 full sheets of stamps and one sheet that is nearly full. Each full sheet is 100, so there are about 600, not 60 or 900. Then set the bigger jar beside the jar of 100: it looks about three times as full, so about 300. Ask how many crayons are in a big box: 6 is too few, 600 is too many, 60 makes sense.
| **Say:** "I use a group I know, like 100, to help me estimate."
- 3 Try it together** (10 min) Show sheets and strips (4 sheets and 7 strips); students write an estimate on whiteboards, then count to check. Then ask everyday questions (slices in a pizza, chairs in the lunchroom) with three choices ten times apart.
- 4 Practice** (15 min) Students choose estimates beside a jar of 100 on sheet 1 of Reasonable Estimates to 1,000 and pick the estimate that makes sense on sheet 2, then do the stamps on sheet 5.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 3.10** and circle a face beside the "I can" line. In the stamps question, 30 means the sheets were counted as tens; ask what one full sheet holds.

Need help? Estimate groups of 10 and 100 under 300 first, then count to check every estimate.

Ready for more? Estimate the letters on a page of a book, then count one line and use it to make a better estimate.

GET READY

- Sheets of 100 stickers or stamps and strips of 10
- A jar of 100 beans or cubes, and a second jar with about 300
- Whiteboards and markers

WORDS TO USE

estimate: a good guess about how many, without counting every one

about: close to, not exact

makes sense: fits what we know about the things

ASK

- How did the full sheet help you estimate?
- Why is 900 too many?
- Was your estimate close to the real count?

WATCH FOR

Counts every stamp instead of estimating.

Cover the full sheets and say "100 each" to count them quickly.

Picks the biggest choice because there are a lot. Compare with the group you know: how many sheets of 100 would 900 be?

Thinks an estimate is wrong if it is not exact.

An estimate is close, not exact; count to see how close it was.

ON ANIMAL MATH

PRINTABLE

Reasonable Estimates to 1,000: sheets 1, 2 and 5

EXIT TICKET

2nd Grade Counting and Comparing to 1,000 Exit Tickets: Exit Ticket 3.10