

NORTH CAROLINA MATHEMATICS

Hundreds, tens, and ones

Grade 2 | NC.2.NBT.1



Teacher scripts, worked models, visual organizers, student tasks, performance records, and keys

30 multiple-choice and 30 open/performance tasks. Choose a few tasks for short lessons across days; this is not a single 60-item test.

Current North Carolina standards for 2026-27 and 2027-28. The adopted 2026 replacement standards begin in 2028-29.

Free sample | Contents

NC.2.NBT.1 | Second Grade mathematics

This sample contains 23 complete selected pages from the 95-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-18, 47-48, 77, 80, 86

Representative activities

M01: sample PDF page(s) 18; original page(s) 17

M02: sample PDF page(s) 19; original page(s) 18

O01: sample PDF page(s) 20; original page(s) 47

O02: sample PDF page(s) 21; original page(s) 48

Selected teacher prompts and keys: original page(s) 2, 77, 80, 86

Using this sample

Read the preparation and access guidance before using a selected activity.
Keep teacher keys and private preparation pages separate from student copies.
Use the original resource contents to see the scope of the complete packet.

Complete paid download

The complete resource includes the full PDF task bank and teaching materials.

TEACHER GUIDE

Start here

Print only selected student pages. Keep models, administration prompts, and answer keys out of view during independent checks. All student pages are marked.

Navigation

3: Standard and targets | 4: Preparation and access
 5-6: Worked teaching models | 7: Anchor chart
 8-9: Reusable student organizers | 10-16: Seven teaching sections
 17-46: Choice bank | 47-76: Open/performance bank
 77-79: Teacher-only administration | 80-85: Choice keys
 86-91: Open keys | 92-93: Scoring and evidence record
 94: Extension and next steps | 95: Sources

A flexible four-session core

Session 1 (15-20 minutes): warm-up M01/O01, then I Do model and M05/O05.

Session 2 (15-20 minutes): We Do M09/O09, then partners M14/O14.

Session 3 (15-20 minutes): independent M19/O19, targeted reteach M24/O24.

Session 4 (10-15 minutes): exit M28/O28, then a fresh task for another target.

These selections are starting points, not full-standard evidence. Use the target table and keys to sample every dimension across later days. Counting conferences may be split with breaks; record any restart. Never impose an invented speed threshold.

Each mode allocates 4/4/5/5/5/4/3 items to warm-up, I Do, We Do, collaborative, independent, reteach, and exit. Mathematical practices: model amounts (MP4), explain and critique reasoning (MP3), and attend to units and notation (MP6).

TEACHER GUIDE

Standard and learning targets

Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

- Unitize by making a hundred from a collection of ten tens.
- Demonstrate that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds, with 0 tens and 0 ones.
- Compose and decompose numbers using various groupings of hundreds, tens, and ones.

U | Make one hundred from ten tens and explain equal quantity.

Z | Model each hundred 100-900 with zero tens and zero ones.

D | Explain the values of three digits in a three-digit number.

G | Compose and decompose a number with different hundreds/tens/ones groupings.

What counts as evidence?

Making a hundred from ten tens | whole hundreds with zero tens/ones | digit values | equivalent regroupings.

Use actual individual performances. Choice questions diagnose and rehearse; they cannot replace building, oral counting, independent reading, or independent writing. All tasks stay inside this standard's range.

Essential question

How can the same quantity have different groups of hundreds, tens, and ones?

TEACHER GUIDE

Prepare and preserve evidence

Prerequisites

Count by tens and recognize a ten as ten ones. Check that counting groups differs from counting individual cubes. A learner can explore regrouping before mastering place-value vocabulary.

Materials and visual supports

Pencils, crayons, supplied mats, and age-appropriate large base-ten blocks or drawings. Adults supervise cutting; avoid small loose objects when unsafe. Each printed hundred is a 10-by-10 grid, each ten is a 1-by-10 rod, and each one is one equally sized cell. They represent quantity, not a promised physical measurement.

Access without supplying answers

Read directions neutrally, enlarge print, offer breaks, and permit AAC, signed responses, or accessible independent entry when they express the same skill. Record the response route. Do not name a numeral during a reading check, supply a numeral to copy during a writing check, count along during oral performance, or assemble groups for a unitizing check.

Writing number names: separate spelling and motor demands from the mathematical name, but record whether words were independently produced. A dictated adult transcription can capture reasoning; it is not independent written production. If a reading or writing mode is inaccessible, mark that dimension N/O and gather valid alternate evidence separately.

Record access supports separately from answer-supplying cues. A model, next number, grouping, or symbol supplied during a check makes it guided evidence. Reteach afterward, then offer a fresh task.

TEACHER GUIDE

I Do: complete model

Make a hundred

Lay out ten rods, each built from ten equal unit squares. Count the rods by tens: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. Arrange the ten rods side by side in a 10-by-10 square. Say: "These are 10 tens and also 1 hundred. Each rod still has ten ones. I changed the grouping, not the amount." Reverse the exchange so students see both directions.

Whole hundreds

Show 300 as three hundred-flats. Say: "Each flat has 100 ones. Three flats have 300 ones. There are 3 hundreds, 0 extra tens, and 0 extra ones." Repeat with 100 and 900; sample the other whole hundreds with the bank.

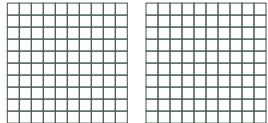
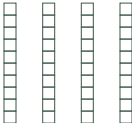
Different groupings

Build 243 as 2 hundreds, 4 tens, and 3 ones. Trade one hundred for ten tens: now 1 hundred, 14 tens, and 3 ones. Check $200 + 40 + 3 = 100 + 140 + 3 = 243$. Trade one ten for ten ones for another grouping: 2 hundreds, 3 tens, 13 ones. All three totals equal 243.

TEACHING DISPLAY

Visual model: connect the units

$$243 = 2 \text{ hundreds} + 4 \text{ tens} + 3 \text{ ones}$$

HUNDREDS	TENS	ONES
		

Trade one hundred for ten tens:

$$243 = 1 \text{ hundred} + 14 \text{ tens} + 3 \text{ ones}$$

$$243 = 100 + 140 + 3$$

Each hundred above is made of ten columns of ten cells. Trace one column as one ten, then count all ten columns.

DISPLAY DURING INSTRUCTION

Anchor chart: think and explain

10 ones make 1 ten.

10 tens make 1 hundred.

A digit tells how many units of its place.

Zero means no extra units in that place.

An exchange changes the groups, not the total.

Cover this chart during an independent check if it would supply the response.

STUDENT MASTER

Reusable place-value mat

Name: _____ Date: _____

My number: _____

HUNDREDS	TENS	ONES

Explain what each group represents.

STUDENT MASTER

Show another way

Name: _____ Date: _____

First grouping: _____

HUNDREDS	TENS	ONES

Second grouping: _____

HUNDREDS	TENS	ONES

What changed? What stayed the same?

TEACHER GUIDE

Warm-up | teaching script

Bank: M01-M04 and O01-O04. Core: M01, O01.**0-2 minutes | Invite**

Say: "Today we will explain the values of three digits in a three-digit number. Show your thinking, and explain what you notice." Prepare the selected task and its teacher-only administration.

2-7 minutes | Teach or observe

Ask the core choice item without teaching the answer. Then invite the actual open performance. Ask "How did you decide?" Use evidence to select the worked model.

7-12 minutes | Listen and respond

Watch the learner make a hundred from ten tens, not merely point to a flat. If a hundred is called ten, count the ten cells in one rod, then the ten rods. For regrouping, record both H/T/O groupings and verify both totals.

Close, record, and extend

Record item, target, exact response, access, answer-supplying cues, and next teaching step. Offer breaks as needed. Early finishers invent a fresh in-range example; another learner verifies it and explains any disagreement. No speed contest.

Core evidence focus: D | Explain the values of three digits in a three-digit number.

TEACHER GUIDE

I Do | teaching script

Bank: M05-M08 and O05-O08. Core: M05, O05.**0-2 minutes | Invite**

Say: "Today we will explain the values of three digits in a three-digit number. Show your thinking, and explain what you notice." Prepare the selected task and its teacher-only administration.

2-7 minutes | Teach or observe

Use every step of the worked model on pages 5-6. Physically build or point to each representation while thinking aloud. Invite the core open task as guided rehearsal; do not label that response independent.

7-12 minutes | Listen and respond

Watch the learner make a hundred from ten tens, not merely point to a flat. If a hundred is called ten, count the ten cells in one rod, then the ten rods. For regrouping, record both H/T/O groupings and verify both totals.

Close, record, and extend

Record item, target, exact response, access, answer-supplying cues, and next teaching step. Offer breaks as needed. Early finishers invent a fresh in-range example; another learner verifies it and explains any disagreement. No speed contest.

Core evidence focus: D | Explain the values of three digits in a three-digit number.

TEACHER GUIDE

We Do | teaching script

Bank: M09-M13 and O09-O13. Core: M09, O09.**0-2 minutes | Invite**

Say: "Today we will explain the values of three digits in a three-digit number. Show your thinking, and explain what you notice." Prepare the selected task and its teacher-only administration.

2-7 minutes | Teach or observe

Ask "What is our first step? What unit or representation are we using?" Let a learner propose a move and another explain why it works. Complete the core task together, then remove the model for a fresh attempt.

7-12 minutes | Listen and respond

Watch the learner make a hundred from ten tens, not merely point to a flat. If a hundred is called ten, count the ten cells in one rod, then the ten rods. For regrouping, record both H/T/O groupings and verify both totals.

Close, record, and extend

Record item, target, exact response, access, answer-supplying cues, and next teaching step. Offer breaks as needed. Early finishers invent a fresh in-range example; another learner verifies it and explains any disagreement. No speed contest.

Core evidence focus: D | Explain the values of three digits in a three-digit number.

TEACHER GUIDE

Collaborative practice | teaching script

Bank: M14-M18 and O14-O18. Core: M14, O14.

0-2 minutes | Invite

Say: "Today we will compose and decompose a number with different hundreds/tens/ones groupings. Show your thinking, and explain what you notice." Prepare the selected task and its teacher-only administration.

2-7 minutes | Teach or observe

Partner A performs O14 while Partner B listens and checks without giving answers. Switch roles using the next open task. Say "Ask your partner to explain; do not do the work for them." Record each learner separately.

7-12 minutes | Listen and respond

Watch the learner make a hundred from ten tens, not merely point to a flat. If a hundred is called ten, count the ten cells in one rod, then the ten rods. For regrouping, record both H/T/O groupings and verify both totals.

Close, record, and extend

Record item, target, exact response, access, answer-supplying cues, and next teaching step. Offer breaks as needed. Early finishers invent a fresh in-range example; another learner verifies it and explains any disagreement. No speed contest.

Core evidence focus: G | Compose and decompose a number with different hundreds/tens/ones groupings.

TEACHER GUIDE

Independent practice | teaching script

Bank: M19-M23 and O19-O23. Core: M19, O19.

0-2 minutes | Invite

Say: "Today we will explain the values of three digits in a three-digit number. Show your thinking, and explain what you notice." Prepare the selected task and its teacher-only administration.

2-7 minutes | Teach or observe

Give the core task individually with models hidden. Read directions only, following the administration page. Wait for the learner to finish and self-correct before asking "How do you know?" Record the response before feedback.

7-12 minutes | Listen and respond

Watch the learner make a hundred from ten tens, not merely point to a flat. If a hundred is called ten, count the ten cells in one rod, then the ten rods. For regrouping, record both H/T/O groupings and verify both totals.

Close, record, and extend

Record item, target, exact response, access, answer-supplying cues, and next teaching step. Offer breaks as needed. Early finishers invent a fresh in-range example; another learner verifies it and explains any disagreement. No speed contest.

Core evidence focus: D | Explain the values of three digits in a three-digit number.

TEACHER GUIDE

Small-group reteach | teaching script

Bank: M24-M27 and O24-O27. Core: M24, O24.

0-2 minutes | Invite

Say: "Today we will make one hundred from ten tens and explain equal quantity. Show your thinking, and explain what you notice." Prepare the selected task and its teacher-only administration.

2-7 minutes | Teach or observe

Choose a documented error. Revisit the appropriate worked model using a smaller amount or shorter sequence, then connect it back to the original range. Ask "What changed? What stayed the same?" Remove support for a fresh task.

7-12 minutes | Listen and respond

Watch the learner make a hundred from ten tens, not merely point to a flat. If a hundred is called ten, count the ten cells in one rod, then the ten rods. For regrouping, record both H/T/O groupings and verify both totals.

Close, record, and extend

Record item, target, exact response, access, answer-supplying cues, and next teaching step. Offer breaks as needed. Early finishers invent a fresh in-range example; another learner verifies it and explains any disagreement. No speed contest.

Core evidence focus: U | Make one hundred from ten tens and explain equal quantity.

TEACHER GUIDE

Exit | teaching script

Bank: M28-M30 and O28-O30. Core: M28, O28.**0-2 minutes | Invite**

Say: "Today we will compose and decompose a number with different hundreds/tens/ones groupings. Show your thinking, and explain what you notice." Prepare the selected task and its teacher-only administration.

2-7 minutes | Teach or observe

Offer the core performance individually. Say "Show what you know today." Do not teach the answer during the check. If this task does not address a missing target, choose another exit or bank task with that target.

7-12 minutes | Listen and respond

Watch the learner make a hundred from ten tens, not merely point to a flat. If a hundred is called ten, count the ten cells in one rod, then the ten rods. For regrouping, record both H/T/O groupings and verify both totals.

Close, record, and extend

Record item, target, exact response, access, answer-supplying cues, and next teaching step. Offer breaks as needed. Early finishers invent a fresh in-range example; another learner verifies it and explains any disagreement. No speed contest.

Core evidence focus: G | Compose and decompose a number with different hundreds/tens/ones groupings.

STUDENT CHOICE

M01 | Warm-up

Name: _____ Date: _____

How many hundreds make 300, with no extra tens or ones?

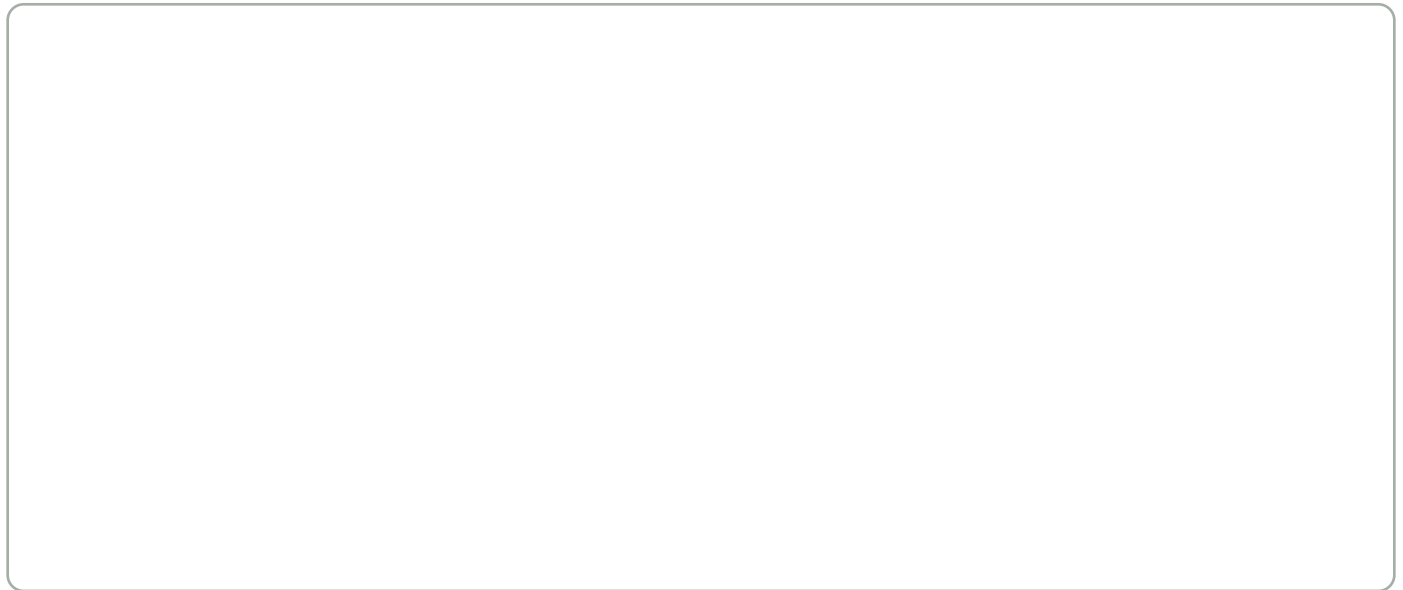
A. 3

B. 2

C. 0

D. 1

Show how you know.



STUDENT CHOICE

M02 | Warm-up

Name: _____ Date: _____

How many hundreds make 500, with no extra tens or ones?

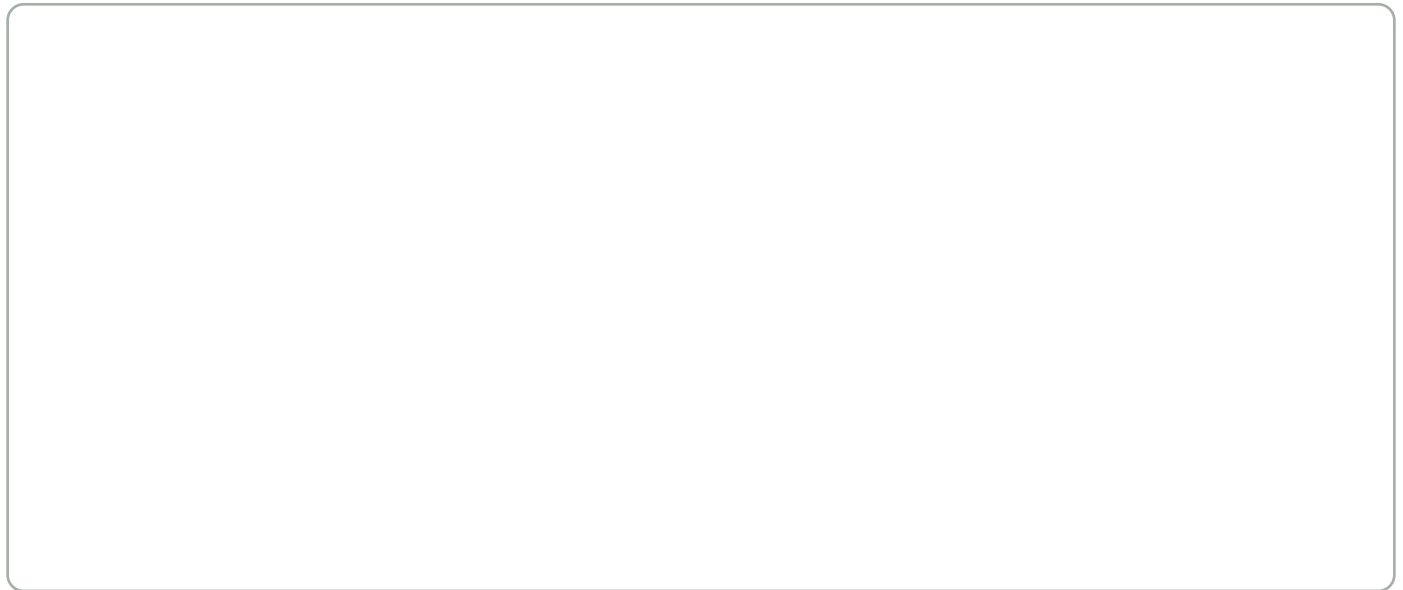
A. 4

B. 3

C. 0

D. 5

Show how you know.



STUDENT PERFORMANCE

001 | Warm-up

Name: _____ Date: _____

Build or draw 230. Explain the value of each digit, including any zero.

My model

HUNDREDS	TENS	ONES

Explain the units and their values:

STUDENT PERFORMANCE

002 | Warm-up

Name: _____ Date: _____

Show 450 in two different groupings of hundreds, tens, and ones. Make one grouping with more than nine ones. Explain the exchange.

First grouping

HUNDREDS	TENS	ONES

Second grouping

HUNDREDS	TENS	ONES

Explain the exchange:

TEACHER GUIDE

Teacher-only administration

Keep this page out of student view. Use each instruction with its matching student page.

O01 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O02 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O03 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O04 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O05 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O06 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O07 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O08 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O09 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

O10 | Read the printed direction neutrally. Supply blocks or blank drawing space. Do not prebuild, regroup, name a target answer, or supply a comparison symbol.

TEACHER GUIDE

Choice keys and teaching notes

M01 | A. 3 | Z

$300 = 3 \text{ hundreds} + 0 \text{ tens} + 0 \text{ ones}$.

M02 | D. 5 | Z

$500 = 5 \text{ hundreds} + 0 \text{ tens} + 0 \text{ ones}$.

M03 | A. 600 | D

630 has 6 hundreds, 3 tens, 0 ones. The hundreds digit represents 600.

M04 | C. 16 | G

$2 \text{ hundreds} + 16 \text{ tens} + 0 \text{ ones} = 200 + 160 + 0 = 360$.

M05 | C. 6 | Z

$600 = 6 \text{ hundreds} + 0 \text{ tens} + 0 \text{ ones}$.

Ask for a demonstration before diagnosing a distractor. An adjacent value may reflect a counting slip; a place-value reversal may reflect a grouping error. A selected answer alone cannot establish the cause.

TEACHER GUIDE

Open/performance worked keys

001 | D

$230 = 2 \text{ hundreds}, 3 \text{ tens}, 0 \text{ ones} = 200 + 30 + 0$. The digits represent these amounts, not simply three counts of single ones.

002 | G

One solution: $4 \text{ hundreds} + 5 \text{ tens} + 0 \text{ ones} = 450$; $4 \text{ hundreds} + 4 \text{ tens} + 10 \text{ ones} = 450$. Trade one ten for ten ones. Both totals equal 450. Accept other correct regroupings with more than nine ones; verify $100\text{H} + 10\text{T} + \text{O} = 450$.

003 | G

One solution: $6 \text{ hundreds} + 0 \text{ tens} + 9 \text{ ones} = 609$; $5 \text{ hundreds} + 9 \text{ tens} + 19 \text{ ones} = 609$. First trade one hundred for ten tens, then trade one ten for ten ones. Both totals equal 609. Accept other correct regroupings with more than nine ones; verify $100\text{H} + 10\text{T} + \text{O} = 609$.

004 | Z

$700 = 7 \text{ hundreds} + 0 \text{ tens} + 0 \text{ ones}$. There are 7 hundred-flats and no extra tens or ones. Each flat contains 100 ones.

005 | D

$506 = 5 \text{ hundreds}, 0 \text{ tens}, 6 \text{ ones} = 500 + 0 + 6$. The digits represent these amounts, not simply three counts of single ones.