

North Carolina mathematics

Grade 2 | Data

Data we can see



NC.2.MD.10

Teacher scripts • original visual models • 30 choice checks • 30 open/performance tasks • worked keys • observation records

Current NC standards for 2026-27 and 2027-28. Adopted 2026 replacements begin 2028-29. Short sessions across days; print selected student pages.

Free sample | Contents

NC.2.MD.10 | Second Grade mathematics

This sample contains 21 complete selected pages from the 96-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-20, 77

Representative activities

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

M02: sample PDF page(s) 20; original page(s) 19

O01: sample PDF page(s) 19; original page(s) 18

O02: sample PDF page(s) 21; original page(s) 20

Selected teacher prompts and keys: original page(s) 77

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.

Contents

Use the next useful task

Teacher guide: exact standard, targets, materials, access, selected-session plan and complete worked model. Seven instructional scripts follow. Original anchors and neutral student organizers precede the bank.

Student bank: M01-M30 choice tasks and O01-O30 open/performance tasks, each on its own labeled page. Teacher-only worked keys follow the student bank. Assessment pages include scoring, an observation form, coverage log and extension. Sources close the packet.

Use page footers and item IDs to select copies. Solved teacher models are for instruction, not independent assessment. All supplied graph data are instructional. No literary passage is needed.

Target key

A | Organize data in up to four categories.

B | Draw single-unit picture and bar graphs.

C | Solve put-together, take-apart and compare problems from both graph types.

Teacher guide

Exact standard and targets

NC.2.MD.10 Organize, represent, and interpret data with up to four categories.

- Draw a picture graph and a bar graph with a single-unit scale to represent a data set.
- Solve simple put-together, take-apart, and compare problems using information presented in a picture and a bar graph.

Target A

Organize data in up to four categories.

Target B

Draw single-unit picture and bar graphs.

Target C

Solve put-together, take-apart and compare problems from both graph types.

Evidence to collect

Retain an organized raw-data table, a learner-drawn picture graph and bar graph for the same dataset, and independently solved put-together, take-apart and comparison questions from BOTH display types.

Teacher guide

Prepare and preserve access

Prerequisites

Count accurately through 40; match one picture to one vote; add and subtract counts within 40. Four categories is the maximum. No scaled-by-2 pictures or fractional symbols are needed.

Materials and safety

Pencil, crayons, blank recording paper and supplied graph spaces. For collection, ask no more than 10 classmates one neutral preference question; no names or personal details are required. All printed data are invented instructional examples.

Vocabulary

Category, data, vote, picture graph, bar graph, key, single-unit scale, total, more, fewer, difference. One square represents one vote. Bars begin at zero.

Neutral access

Read directions and choices neutrally; accept pointing, AAC, sign, oral explanation or dictation. Adult drawing/cutting may follow exact learner directions for motor access. Record who made each mathematical decision. Do not score handwriting, spelling or accent. Larger outlines and tactile boundaries are allowed; supplied centers, counts, shape names or completed models are answer-supplying cues, not neutral access.

Teacher guide

Plan short sessions

Use 10-20 minute sessions across several days. Select one or two tasks at a time. This 60-item bank is not one sitting or a timed test. Repeat accessible fresh attempts until each required target has evidence. No official mastery threshold or speed cutoff is implied.

Warm-up: M01-M04 and O01-O04; 4 choice and 4 open/performance tasks.

I Do: M05-M08 and O05-O08; 4 choice and 4 open/performance tasks.

We Do: M09-M13 and O09-O13; 5 choice and 5 open/performance tasks.

Collaborative practice: M14-M18 and O14-O18; 5 choice and 5 open/performance tasks.

Independent practice: M19-M23 and O19-O23; 5 choice and 5 open/performance tasks.

Small-group reteach: M24-M27 and O24-O27; 4 choice and 4 open/performance tasks.

Exit ticket: M28-M30 and O28-O30; 3 choice and 3 open/performance tasks.

Suggested sequence

Days 1-2 organize and model both displays; days 3-4 solve all three problem types; days 5-6 partner graph checks; days 7-8 independent survey, both graphs and interpretation.

Separate teaching from evidence

I Do and We Do are supported instruction. Independent practice and exit tasks use fresh materials without solved anchors in view. Collaborative work still requires each learner to act and explain individually.

Teacher model

Say, show, solve

Say: Art has 3 votes, Music 5, Games 2, Books 4. I record each vote once. Draw 3, 5, 2 and 4 equal picture symbols; label the key one square = one vote. Draw bars from zero to 3, 5, 2 and 4 on a single-unit scale. Art and Music together: $3 + 5 = 8$. Not Music: $14 - 5 = 9$. Music has $5 - 2 = 3$ more votes than Games. Point to the same counts in both displays.

Respond to a misconception

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Prompt for proof

Ask: How could you show that? Give wait time. Record the learner explanation before offering a model. Use a new example after teaching to check transfer.

Teacher script | Warm-up

Warm-up in action

Purpose and selected evidence

Bank: M01-M04, O01-O04. Choose 1-2 per meeting; the selections below may span days.

0-2 minutes | Invite

State the task, offer its materials and ask the learner to propose a first step. Do not preview an independent answer.

2-9 minutes | Exact teacher moves

Invite a count from M01, then organize O03 on a separate day. Ask: How can we keep every vote in exactly one category?

9-13 minutes | Check and respond

Ask: Show how you know. Listen for counts tied to categories, one-unit meaning and an equation that fits the question.

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Extend and record

Ask a new question using the same data, including a tie or a zero category in a later dataset. Record item, exact action, response, access, answer-supplying cues and a next step. Timing is flexible.

Teacher script | I Do

I Do in action

Purpose and selected evidence

Bank: M05-M08, O05-O08. Choose 1-2 per meeting; the selections below may span days.

0-2 minutes | Invite

State the task, offer its materials and ask the learner to propose a first step. Do not preview an independent answer.

2-9 minutes | Exact teacher moves

Demonstrate the worked 3,5,2,4 dataset in both displays. Trace zero and one interval. Model all three equations aloud, then try O07 and O08.

9-13 minutes | Check and respond

Ask: Show how you know. Listen for counts tied to categories, one-unit meaning and an equation that fits the question.

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Extend and record

Ask a new question using the same data, including a tie or a zero category in a later dataset. Record item, exact action, response, access, answer-supplying cues and a next step. Timing is flexible.

Teacher script | We Do

We Do in action

Purpose and selected evidence

Bank: M09-M13, O09-O13. Choose 1-2 per meeting; the selections below may span days.

0-2 minutes | Invite

State the task, offer its materials and ask the learner to propose a first step. Do not preview an independent answer.

2-9 minutes | Exact teacher moves

Use M09 and O10. Ask learners to read the category, state its count, then choose an equation for together and not Art. Do not supply the operation before their explanation.

9-13 minutes | Check and respond

Ask: Show how you know. Listen for counts tied to categories, one-unit meaning and an equation that fits the question.

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Extend and record

Ask a new question using the same data, including a tie or a zero category in a later dataset. Record item, exact action, response, access, answer-supplying cues and a next step. Timing is flexible.

Teacher script | Collaborative practice

Collaborative practice in action

Purpose and selected evidence

Bank: M14-M18, O14-O18. Choose 1-2 per meeting; the selections below may span days.

0-2 minutes | Invite

State the task, offer its materials and ask the learner to propose a first step. Do not preview an independent answer.

2-9 minutes | Exact teacher moves

Pairs solve O15-O18 on separate sessions. One builds or solves, the other checks against the data. Swap roles so each organizes and interprets.

9-13 minutes | Check and respond

Ask: Show how you know. Listen for counts tied to categories, one-unit meaning and an equation that fits the question.

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Extend and record

Ask a new question using the same data, including a tie or a zero category in a later dataset. Record item, exact action, response, access, answer-supplying cues and a next step. Timing is flexible.

Teacher script | Independent practice

Independent practice in action

Purpose and selected evidence

Bank: M19-M23, O19-O23. Choose 1-2 per meeting; the selections below may span days.

0-2 minutes | Invite

State the task, offer its materials and ask the learner to propose a first step. Do not preview an independent answer.

2-9 minutes | Exact teacher moves

Use M19-M23 and O19-O23 across sessions. Read neutrally. Ask learners to explain where each number came from. Collect both graph creation and category comparisons.

9-13 minutes | Check and respond

Ask: Show how you know. Listen for counts tied to categories, one-unit meaning and an equation that fits the question.

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Extend and record

Ask a new question using the same data, including a tie or a zero category in a later dataset. Record item, exact action, response, access, answer-supplying cues and a next step. Timing is flexible.

Teacher script | Small-group reteach

Small-group reteach in action

Purpose and selected evidence

Bank: M24-M27, O24-O27. Choose 1-2 per meeting; the selections below may span days.

0-2 minutes | Invite

State the task, offer its materials and ask the learner to propose a first step. Do not preview an independent answer.

2-9 minutes | Exact teacher moves

Rebuild one equal-valued picture row and a bar beginning at zero. Show matched pairs for comparison. Remove the example, then use a fresh task from O24-O27.

9-13 minutes | Check and respond

Ask: Show how you know. Listen for counts tied to categories, one-unit meaning and an equation that fits the question.

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Extend and record

Ask a new question using the same data, including a tie or a zero category in a later dataset. Record item, exact action, response, access, answer-supplying cues and a next step. Timing is flexible.

Teacher script | Exit ticket

Exit ticket in action

Purpose and selected evidence

Bank: M28-M30, O28-O30. Choose 1-2 per meeting; the selections below may span days.

0-2 minutes | Invite

State the task, offer its materials and ask the learner to propose a first step. Do not preview an independent answer.

2-9 minutes | Exact teacher moves

Collect O28 survey table, O29 picture graph and O30 bar graph across three sessions. Ask a fresh put-together and take-apart question from each graph; record the exact question and response.

9-13 minutes | Check and respond

Ask: Show how you know. Listen for counts tied to categories, one-unit meaning and an equation that fits the question.

If a learner counts grid lines rather than units, mark the zero start and one-unit interval during teaching, then give a fresh graph. If compare means add, match the two categories vote-for-vote and count what remains. If pictures vary in value, return to the single-unit key.

Extend and record

Ask a new question using the same data, including a tie or a zero category in a later dataset. Record item, exact action, response, access, answer-supplying cues and a next step. Timing is flexible.

Teacher anchor | worked displays

One dataset, two graphs

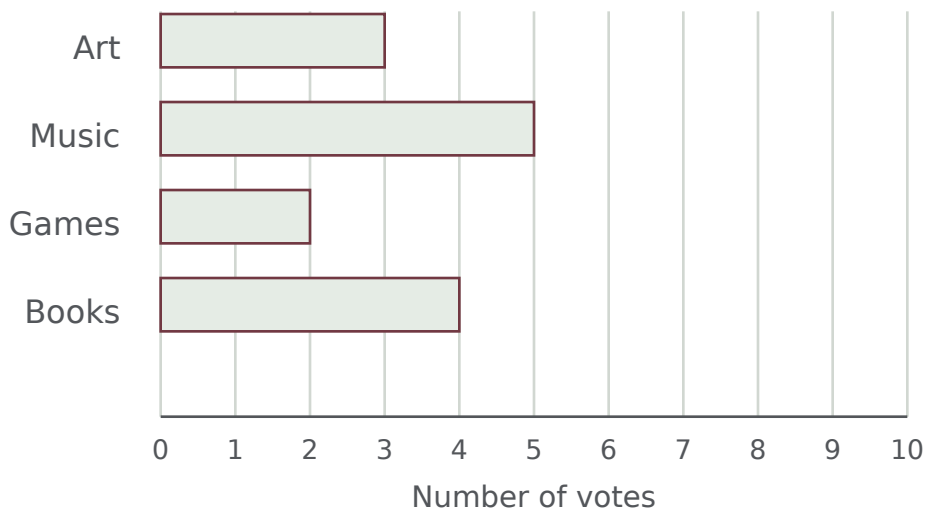
Teaching example only. Compare each category across both graphs. All data are invented practice data.

Club votes

Key: one square = one vote



Club votes



Together: $3 + 5 = 8$. Not Music: $14 - 5 = 9$. Compare Music and Games: $5 - 2 = 3$.

Student organizer

Sort, count and check

My question: _____

Use up to four categories. Each response belongs once.

Category 1: _____ Tally: _____ Count: _____

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Category 2: _____ Tally: _____ Count: _____

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Category 3: _____ Tally: _____ Count: _____

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Category 4: _____ Tally: _____ Count: _____

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Total responses: _____ How I checked: _____

Student organizer

Explain and check

My task: _____

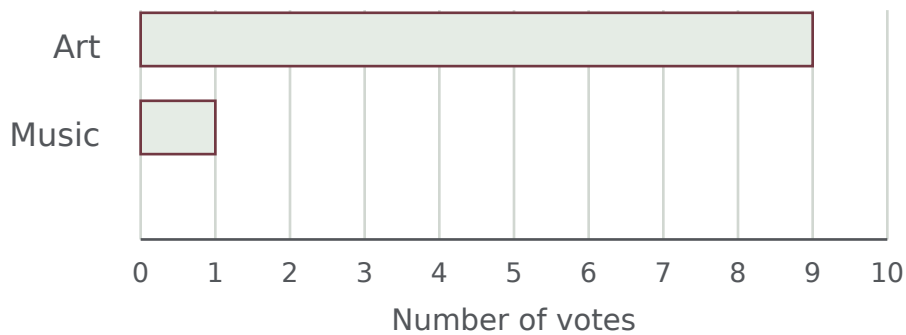
I know because: _____

Student | Warm-up

M01 | Choose and explain

Name: _____ Date: _____

How many votes are for Music?

Club votes (practice data)

A. 5

B. 1

C. 3

D. 9

Tell or show how you know.

Student | Warm-up

001 | Make and explain

Name: _____ Date: _____

Use these votes: Art 9, Music 1. Draw a picture graph. Give it a title. Show one vote per picture and give a key.

Title: _____

Key: _____

Art

Music



Tell or show how you know. An adult may record your words.

My explanation: _____

Student | Warm-up

M02 | Choose and explain

Name: _____ Date: _____

How many votes are for Art and Music together?**Club votes (practice data)**

Key: one square = one vote

Art ☐ ☐Music ☐ ☐ ☐Games ☐Books ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

A. 7

B. 8

C. 5

D. 13

Tell or show how you know.

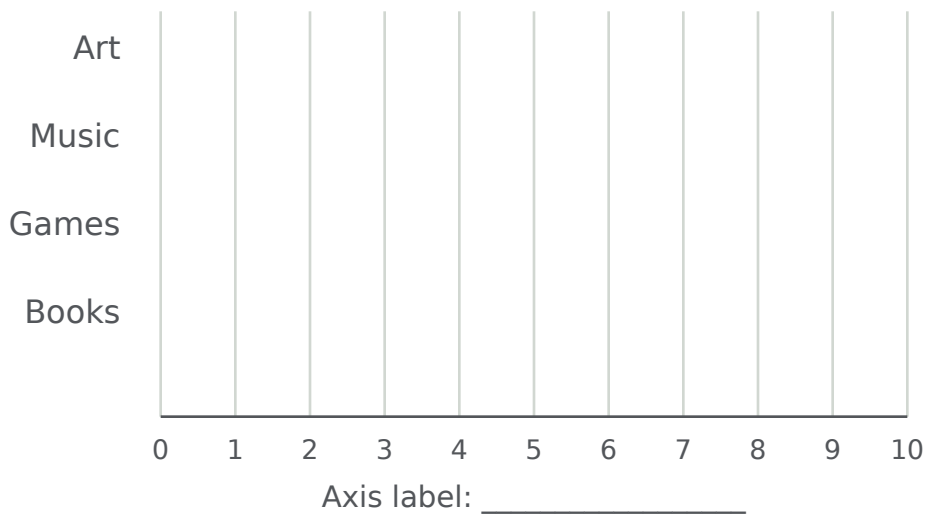
Student | Warm-up

002 | Make and explain

Name: _____ Date: _____

Use these votes: Art 2, Music 3, Games 1, Books 8. Draw a bar graph. Give it a title. Show one vote per unit. Label the number axis.

Title: _____



Tell or show how you know. An adult may record your words.

My explanation: _____

Teacher-only worked keys

Items 01-02

M01 | B - 1

Target C. Read Music: 1 votes.

001 | Accepted evidence

Target B. Title describes votes; each category appears once with counts {'Art': 9, 'Music': 1}. One identical square per vote and key one square = one vote.

Accept mathematically equivalent explanations; record actual work and any mathematical cue separately.

M02 | C - 5

Target C. $2 + 3 = 5$ votes.

002 | Accepted evidence

Target B. Title describes votes; each category appears once with counts {'Art': 2, 'Music': 3, 'Games': 1, 'Books': 8}. Bars start at zero and end at the exact count on the provided 0-10 single-unit axis.

Accept mathematically equivalent explanations; record actual work and any mathematical cue separately.