

NORTH CAROLINA MATHEMATICS • 2026-27

Show Addition and Subtraction



Kindergarten • Operations and Algebraic Thinking

NC.K.OA.1 • Representations and connections

Seven teaching phases, detailed adult scripts, original countable models, reusable organizers, individual performance evidence and complete keys.

30 choice prompts + 30 open/performance tasks. Choose short activities across days. This reusable bank is not a 60-item sitting.

Current SCOS; 2025 Kindergarten Quick Reference Guide; not the 2026 standards scheduled for 2028-29.

Free sample | Contents

NC.K.OA.1 | Kindergarten mathematics

This sample contains 19 complete selected pages from the 64-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-17, 48-49

Representative activities

M01: sample PDF page(s) 17; original page(s) 16

M02: sample PDF page(s) 18; original page(s) 17

O01: sample PDF page(s) 17; original page(s) 16

O02: sample PDF page(s) 18; original page(s) 17

Selected teacher prompts and keys: original page(s) 48-49

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.

START HERE

Use the packet well

Teacher guide → models and reusable tools → 30 paired student activity pages → individual evidence records → complete keys → sources. Student activity pages each hold M01/O01 through M30/O30; match IDs in the guide and keys.

Selected core across five days

Day 1, 12-15 minutes: Warm-up M01/O01, then I Do M05/O05.

Day 2, 10-12 minutes: We Do M09/O09, repeat the model with a new set.

Day 3, 10-12 minutes: Partner M14/O14; collect a separate demonstration from each child.

Day 4, 10-12 minutes: Independent M19/O19; use small-group M24/O24 only if evidence calls for it.

Day 5, 5-8 minutes: Exit M28/O28 and the additional coverage check below.

Additional coverage check

Observe O02 or O06 as well as an addition task. Across the selected tasks, collect both addition and subtraction in at least two representations and a connection between them.

Print selectively

Keep teacher scripts and keys away from students. Read each prompt and all options without emphasizing a choice. A correct choice is recognition evidence only. Have the child construct or draw the open task before using any answer-supplying cues.

TEACHER GUIDE

Exact standard and targets

NC.K.OA.1

Represent addition and subtraction, within 10:

- Use a variety of representations such as objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, or expressions.
- Demonstrate understanding of addition and subtraction by making connections among representations.

Scope guardrails

All additions have totals at most 10; all subtraction starts and results are from 0 to 10. Use varied representations and make explicit connections. Formal equation writing is optional; merely giving a correct number is insufficient evidence of the complete standard.

Daily I Can targets

I can show joining and taking away. I can show the same action in another way. I can point to how the quantities and actions match.

Essential question

How can different models show the same addition or subtraction?

TEACHER GUIDE

Prepare for access and learning

Materials and prior learning

Large age-appropriate counters, two paper mats, crayons, blank paper and the reusable organizers. Prior learning: match one object to each count word, know the last number names the total, and distinguish an empty group. Begin with totals of 2-5 if counting accuracy blocks the operation. Avoid small choking hazards; do not use food as a required manipulative.

Neutral language and response routes

Read every prompt and option in a steady voice. Repeat the whole prompt on request. Explain unfamiliar object names before the task without demonstrating its solution. Children may speak, sign, point, use AAC, dictate labels, move large objects or draw. Scribe exactly what the child indicates. Do not score handwriting, accent, spelling or English decoding.

Keep the mathematical evidence intact

Sounds can be taps or beats with a matching visual cue. Fingers can be replaced by accessible counters. For a mental-image task, invite the child to describe or draw the image; do not infer an unseen mental representation from silence. Record which two representations were actually observed.

Useful words

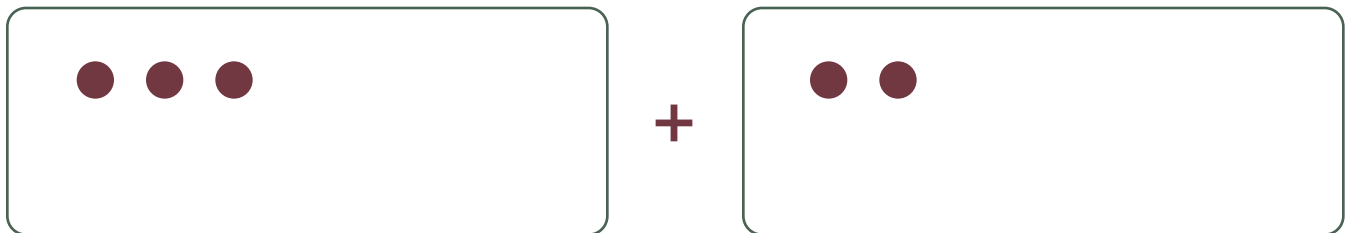
whole / altogether: all the objects; part: one group; join: bring groups together; take away: remove objects; left: what stays; empty: no objects. Pair each word with an action before assessment.

TEACHER MODEL • EXPLICIT DEMONSTRATION

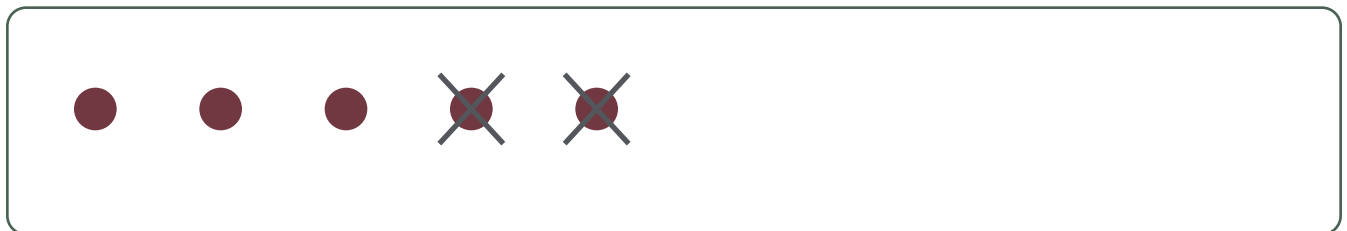
Watch, connect, and check

Set out 5 large counters and two mats. This is an instructional demonstration; do not score children for copying it.

Say: “I put 3 counters here and 2 here. I join them. I count all five: 1, 2, 3, 4, 5.” Move the two groups into one. “Now I draw 3 dots and 2 dots. Each dot stands for one counter. Both ways show 5 altogether.”



Point between each group and its drawing. Optional expression: $3 + 2 = 5$. Say: “The 3 names this part; the 2 names that part; the 5 names the whole.” Then start with 5, move 2 away and draw a line through the matching 2 dots. “Both models start with 5, remove 2 and leave 3.”



Optional expression: $5 - 2 = 3$. Ask: “What is the same in the objects and drawing?” Wait for a quantity/action connection rather than supplying it.

REUSABLE STUDENT TOOL

My two mats

Show the parts with objects or drawings.

Mat 1

Mat 2

Tell or show what your model means.

Adult: label parts only when the child has identified them. Record required supports separately.

REUSABLE STUDENT TOOL

My model and my record

Show it one way. Then show it another way.

Way 1

Way 2

I checked by...

Adult may scribe the child's explanation. Objects, dictated expressions and accessible drawings are valid. Do not supply the parts or action.

TEACHER SCRIPT • WARM-UP

Warm-up in a short session

Reusable bank: M01-M04 and O01-O04. Selected core: M01/O01. Choose alternatives later; do not assign the whole range at once.

0-2 minutes • Launch

Set out only the objects named in the selected task. Say: “Listen to the whole task. You can show your thinking with these objects or a drawing. Tell me when you are ready.” Read: “Join 1 shell and 1 more. Use objects and drawing to show the same action. Tell how the two ways match.”

2-5 minutes • Explore

Invite the child to count the available set and show an empty mat. Ask, “What do you notice?” Watch one-to-one correspondence before giving the operation prompt.

Expected mathematics: $1 + 1 = 2$. Show groups of 1 and 1, then 2 in all in each representation. Sample connection: “Both ways show 2 at the end.” Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Match each object to a drawn mark; show removed marks with crossing out.

5-8 minutes • Connect and check

Ask: “Point to the same quantity in your two ways. Where do we see the joining or taking away?” If the child gives only a total, ask for a second representation, then a correspondence.

Read the selected M prompt and all four options neutrally. Ask the child to point to one. Use the M response to plan discussion; do not replace O evidence with it.

8-10 minutes • Respond and record

If the child loses track, return objects to the starting set and invite one-to-one matching. If the mathematical action is wrong, reenact the task slowly after recording the first attempt. Record date, ID, exact model/record, support, and next step. Early finisher: show why one incorrect choice does not fit, using objects rather than guessing.

TEACHER SCRIPT • I DO

I Do in a short session

Reusable bank: M05-M08 and O05-O08. Selected core: M05/O05. Choose alternatives later; do not assign the whole range at once.

0-2 minutes • Launch

Set out only the objects named in the selected task. Say: “Listen to the whole task. You can show your thinking with these objects or a drawing. Tell me when you are ready.” Read: “Join 4 leaves and 1 more. Use mental image and drawing to show the same action. Tell how the two ways match.”

2-5 minutes • Model

Think aloud using the worked-model page first. Point from every object to its matching mark. Then use the selected task below as a guided imitation; label this as modeled practice, not independent evidence.

Expected mathematics: $4 + 1 = 5$. Show groups of 4 and 1, then 5 in all in each representation. Sample connection: “Both ways show 5 at the end.” Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Imagine the stated groups/action, then describe the image and draw it. Have the child indicate corresponding imagined and drawn quantities; do not assume an unreported image.

5-8 minutes • Connect and check

Ask: “Point to the same quantity in your two ways. Where do we see the joining or taking away?” If the child gives only a total, ask for a second representation, then a correspondence.

Read the selected M prompt and all four options neutrally. Ask the child to point to one. Use the M response to plan discussion; do not replace O evidence with it.

8-10 minutes • Respond and record

If the child loses track, return objects to the starting set and invite one-to-one matching. If the mathematical action is wrong, reenact the task slowly after recording the first attempt. Record date, ID, exact model/record, support, and next step. Early finisher: show why one incorrect choice does not fit, using objects rather than guessing.

TEACHER SCRIPT • WE DO

We Do in a short session

Reusable bank: M09-M13 and O09-O13. Selected core: M09/O09. Choose alternatives later; do not assign the whole range at once.

0-2 minutes • Launch

Set out only the objects named in the selected task. Say: “Listen to the whole task. You can show your thinking with these objects or a drawing. Tell me when you are ready.”

Read: “Join 4 toy ducks and 5 more. Use acting and objects to show the same action. Tell how the two ways match.”

2-5 minutes • Explore

Ask one child to choose the starting model and another to check each quantity. Pause before moving objects. Ask, “What should our model show next? How does the task tell us?”

Expected mathematics: $4 + 5 = 9$. Show groups of 4 and 5, then 9 in all in each representation. Sample connection: “Both ways show 9 at the end.” Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Act as moving objects between mats, or direct an adult to move them; connect each movement to the counter model. Do not require unsafe movement or classmates as counters.

5-8 minutes • Connect and check

Ask: “Point to the same quantity in your two ways. Where do we see the joining or taking away?” If the child gives only a total, ask for a second representation, then a correspondence.

Read the selected M prompt and all four options neutrally. Ask the child to point to one. Use the M response to plan discussion; do not replace O evidence with it.

8-10 minutes • Respond and record

If the child loses track, return objects to the starting set and invite one-to-one matching. If the mathematical action is wrong, reenact the task slowly after recording the first attempt. Record date, ID, exact model/record, support, and next step. Early finisher: show why one incorrect choice does not fit, using objects rather than guessing.

TEACHER SCRIPT • COLLABORATIVE PRACTICE

Collaborative practice in a short session

Reusable bank: M14-M18 and O14-O18. Selected core: M14/O14. Choose alternatives later; do not assign the whole range at once.

0-2 minutes • Launch

Set out only the objects named in the selected task. Say: “Listen to the whole task. You can show your thinking with these objects or a drawing. Tell me when you are ready.” Read: “Show 8 balls. Take away 3. Use acting and objects to show the same action. Tell how the two ways match.”

2-5 minutes • Explore

Partner A models the task; Partner B checks without moving A’s objects. Then swap roles using the next item in the range. Each child must explain or point out their own model; do not give both children one shared score.

Expected mathematics: $8 - 3 = 5$. Start with 8; remove or mark exactly 3; show 5 left in each representation. Sample connection: “Both ways show 8 at the start.” Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Act as moving objects between mats, or direct an adult to move them; connect each movement to the counter model. Do not require unsafe movement or classmates as counters.

5-8 minutes • Connect and check

Ask: “Point to the same quantity in your two ways. Where do we see the joining or taking away?” If the child gives only a total, ask for a second representation, then a correspondence.

Read the selected M prompt and all four options neutrally. Ask the child to point to one. Use the M response to plan discussion; do not replace O evidence with it.

8-10 minutes • Respond and record

If the child loses track, return objects to the starting set and invite one-to-one matching. If the mathematical action is wrong, reenact the task slowly after recording the first attempt. Record date, ID, exact model/record, support, and next step. Early finisher: show why one incorrect choice does not fit, using objects rather than guessing.

TEACHER SCRIPT • INDEPENDENT PRACTICE

Independent practice in a short session

Reusable bank: M19-M23 and O19-O23. Selected core: M19/O19. Choose alternatives later; do not assign the whole range at once.

0-2 minutes • Launch

Set out only the objects named in the selected task. Say: “Listen to the whole task. You can show your thinking with these objects or a drawing. Tell me when you are ready.” Read: “Join 4 flags and 4 more. Use acting and objects to show the same action. Tell how the two ways match.”

2-5 minutes • Explore

Read the task and provide materials, then wait. Do not point to an option, rearrange objects or confirm intermediate answers. Repeat neutral directions as needed. Record the first complete attempt before feedback.

Expected mathematics: $4 + 4 = 8$. Show groups of 4 and 4, then 8 in all in each representation. Sample connection: “Both ways show 8 at the end.” Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Act as moving objects between mats, or direct an adult to move them; connect each movement to the counter model. Do not require unsafe movement or classmates as counters.

5-8 minutes • Connect and check

Ask: “Point to the same quantity in your two ways. Where do we see the joining or taking away?” If the child gives only a total, ask for a second representation, then a correspondence.

Read the selected M prompt and all four options neutrally. Ask the child to point to one. Use the M response to plan discussion; do not replace O evidence with it.

8-10 minutes • Respond and record

If the child loses track, return objects to the starting set and invite one-to-one matching. If the mathematical action is wrong, reenact the task slowly after recording the first attempt. Record date, ID, exact model/record, support, and next step. Early finisher: show why one incorrect choice does not fit, using objects rather than guessing.

TEACHER SCRIPT • SMALL-GROUP RETEACH

Small-group reteach in a short session

Reusable bank: M24-M27 and O24-O27. Selected core: M24/O24. Choose alternatives later; do not assign the whole range at once.

0-2 minutes • Launch

Set out only the objects named in the selected task. Say: “Listen to the whole task. You can show your thinking with these objects or a drawing. Tell me when you are ready.” Read: “Show 5 seeds. Take away 3. Use acting and objects to show the same action. Tell how the two ways match.”

2-5 minutes • Explore

Use a smaller whole of 3 first, model once, then return to the selected task. Ask the child to touch each object exactly once. Separate access support from hints that supply the mathematical answer.

Expected mathematics: $5 - 3 = 2$. Start with 5; remove or mark exactly 3; show 2 left in each representation. Sample connection: “Both ways show 5 at the start.” Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Act as moving objects between mats, or direct an adult to move them; connect each movement to the counter model. Do not require unsafe movement or classmates as counters.

5-8 minutes • Connect and check

Ask: “Point to the same quantity in your two ways. Where do we see the joining or taking away?” If the child gives only a total, ask for a second representation, then a correspondence.

Read the selected M prompt and all four options neutrally. Ask the child to point to one. Use the M response to plan discussion; do not replace O evidence with it.

8-10 minutes • Respond and record

If the child loses track, return objects to the starting set and invite one-to-one matching. If the mathematical action is wrong, reenact the task slowly after recording the first attempt. Record date, ID, exact model/record, support, and next step. Early finisher: show why one incorrect choice does not fit, using objects rather than guessing.

TEACHER SCRIPT • EXIT TICKET

Exit ticket in a short session

Reusable bank: M28-M30 and O28-O30. Selected core: M28/O28. Choose alternatives later; do not assign the whole range at once.

0-2 minutes • Launch

Set out only the objects named in the selected task. Say: “Listen to the whole task. You can show your thinking with these objects or a drawing. Tell me when you are ready.” Read: “Show 10 pom-poms. Take away 5. Use sounds and drawing to show the same action. Tell how the two ways match.”

2-5 minutes • Explore

Use a fresh setup. Read the task once, then repeat neutrally if requested. Collect an individual model and explanation before the choice prompt if you want a less-cued performance sample.

Expected mathematics: $10 - 5 = 5$. Start with 10; remove or mark exactly 5; show 5 left in each representation. Sample connection: “Both ways show 10 at the start.” Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. For joining, tap once per object in each part and draw matching dots. For taking away, tap the starting quantity, draw that many dots, then cross out the removed quantity; tap the uncrossed quantity to verify what remains. Explain how the sound counts match the drawing.

5-8 minutes • Connect and check

Ask: “Point to the same quantity in your two ways. Where do we see the joining or taking away?” If the child gives only a total, ask for a second representation, then a correspondence.

Read the selected M prompt and all four options neutrally. Ask the child to point to one. Use the M response to plan discussion; do not replace O evidence with it.

8-10 minutes • Respond and record

If the child loses track, return objects to the starting set and invite one-to-one matching. If the mathematical action is wrong, reenact the task slowly after recording the first attempt. Record date, ID, exact model/record, support, and next step. Early finisher: show why one incorrect choice does not fit, using objects rather than guessing.

TEACHER PLANNING

Diagnose and extend

Misconception → response

Counts removed objects as left → physically move those objects off the mat, compare the crossed-out drawing with the objects that remain. Makes a second model with a different quantity → match objects and marks one to one. Says only the final number → ask the child to point to the start/parts and action in both models.

Two-session inquiry • strategic reasoning

Session A: Choose a joining or taking-away example within 10. Build two representations and make a record. Session B: A partner checks whether the quantities and action match. Revise any mismatch and explain which feature had to change. Do not label this as a mandated DOK 4 task.

Mathematical practices

Make sense of the task (MP1), connect quantities to a model (MP2/MP4), justify a model and check a partner's claim (MP3), use counters and drawings thoughtfully (MP5), and attend to what each number counts (MP6). These practices are integrated, not separate packet standards.

Optional home connection

Invite a family member to use up to 10 large household objects. The child shows a joining/taking-away story or two parts of a whole, aligned to the lesson. Adult asks "How do you know?" No worksheet, photograph, purchase or internet access is required.

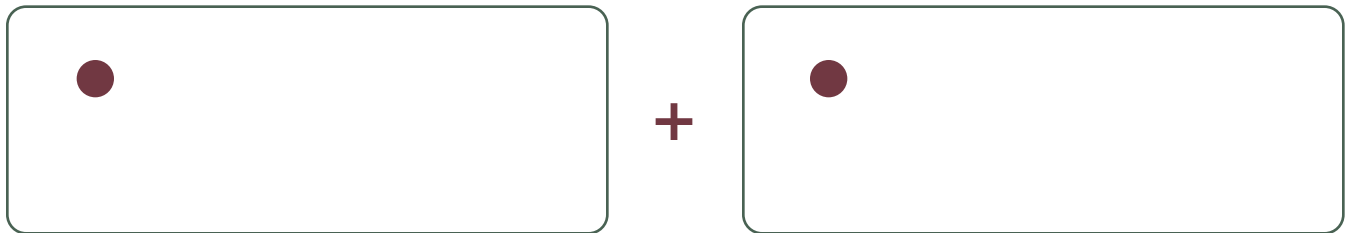
WARM-UP • ACTIVITY 1

Listen, choose, and show

Name _____ Date _____

Adult: read the prompt and all choices neutrally.

M01 • The dots show 1 shell joining 1 more. How many altogether?



A. 2

B. 1

C. 3

D. 0

O01 • Join 1 shell and 1 more. Use objects and drawing to show the same action. Tell how the two ways match.

Way 1

Way 2

Use this space or real objects. Tell or show your thinking; an adult may record it.

WARM-UP • ACTIVITY 2

Listen, choose, and show

Name _____ Date _____

Adult: read the prompt and all choices neutrally.

M02 • The dots show 3 blocks. 2 are crossed out. How many stay?



A. 2

B. 1

C. 4

D. 3

O02 • Show 3 blocks. Take away 2. Use fingers and objects to show the same action. Tell how the two ways match.

Way 1

Way 2

Use this space or real objects. Tell or show your thinking; an adult may record it.

TEACHER-ONLY KEYS

How to use the keys

The following pages key every M and O item. The O response is a sample: accept equivalent correct objects, drawings, communication and valid decompositions. Do not require children to repeat the sample words or write equations unless they choose expressions as their record.

When an O task uses the same quantities as its paired M task, collect O first for less-cued individual evidence. For independent transfer, choose another O task on a later day.

Number and diagram checks

All pictured circles are countable original vector graphics. Crossed-out circles remain visible to show the starting whole; only un-crossed circles count as left. Empty parts are labeled “empty.” Every operation uses whole-number quantities from 0 to 10 and addition totals no greater than 10.

Reading the diagnostic notes

A wrong numerical choice may come from miscounting, misreading a model or confusing the whole and a part. The key identifies its mathematical difference; it is a hypothesis for a follow-up observation, not a diagnosis from one choice.

Coverage matrix

addition connections: M01, O01, M03, O03, M05, O05, M07, O07, M09, O09, M11, O11, M13, O13, M15, O15, M17, O17, M19, O19, M21, O21, M23, O23, M25, O25, M27, O27, M29, O29

subtraction connections: M02, O02, M04, O04, M06, O06, M08, O08, M10, O10, M12, O12, M14, O14, M16, O16, M18, O18, M20, O20, M22, O22, M24, O24, M26, O26, M28, O28, M30, O30

TEACHER-ONLY COMPLETE KEY

Items 01-02

M01 • Warm-up

Target: Interpret an addition drawing within 10

A: 2. $1 + 1 = 2$. Count the two groups as one whole.

Distractors: B (1): 1 too few; recheck each object and the action; C (3): 1 too many; recheck each object and the action; D (0): 2 too few; recheck each object and the action

O01 • Model and explain

Target: Represent addition in two ways and connect the quantities/action

$1 + 1 = 2$. Show groups of 1 and 1, then 2 in all in each representation. Sample connection: "Both ways show 2 at the end." Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Match each object to a drawn mark; show removed marks with crossing out.

Look for the actual model/record. Apply the dimension rubric; retain access supports and document any answer-supplying cue.

M02 • Warm-up

Target: Interpret a subtraction drawing within 10

B: 1. $3 - 2 = 1$. The crossed-out counters are not left.

Distractors: A (2): 1 too many; recheck each object and the action; C (4): 3 too many; recheck each object and the action; D (3): 2 too many; recheck each object and the action

O02 • Model and explain

Target: Represent subtraction in two ways and connect the quantities/action

$3 - 2 = 1$. Start with 3; remove or mark exactly 2; show 1 left in each representation. Sample connection: "Both ways show 3 at the start." Pointing between matching parts is valid. The action and each quantity must correspond, not just the final number. Show the starting/part quantities on fingers (or an accessible finger model), then match to counters. Lower exactly 2 fingers to show removal.

Look for the actual model/record. Apply the dimension rubric; retain access supports and document any answer-supplying cue.