

Two Steps, One Story



Grade 3 | NC.3.OA.8

Teacher scripts • Original visual tools • 60-item bank
Worked solutions • Individual performance records

Current NC standards for 2026-27 and 2027-28. Select short lessons across several sessions. This reusable bank is not a single 60-item test.

Free sample | Contents

NC.3.OA.8 | Third Grade mathematics

This sample contains 18 complete selected pages from the 91-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-14, 29-30, 59, 74

Representative activities

M01: sample PDF page(s) 15; original page(s) 14

M02: sample PDF page(s) 15; original page(s) 14

O01: sample PDF page(s) 16; original page(s) 29

O02: sample PDF page(s) 17; original page(s) 30

Selected teacher prompts and keys: original page(s) 59, 74

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

Standard and learning targets

Solve two-step word problems using addition, subtraction, and multiplication, representing problems using equations with a symbol for the unknown number.

Learning targets

- Identify two linked steps in a word problem using addition, subtraction and multiplication.
- Represent the unknown with a symbol in an equation and explain each quantity.
- Solve and interpret the answer in the story; check whether both steps are accounted for.

Mathematical practices: MP2 connects quantities and symbols; MP3 explains and critiques reasoning; MP5 chooses useful tools; MP7 uses mathematical structure. Record actual performances, not only correct choices.

TEACHER GUIDE

Plan, access and materials

Use four sessions of about 20-30 minutes, adjusted to need. Day 1: warm-up and model (M01, O01, M05, O05). Day 2: shared and partner work (M09, O09, M14, O14). Day 3: independent evidence (M19, O19). Day 4: targeted reteach and exit (M24, O24, M28, O28). Other items are for spaced practice or fresh checks.

Prerequisites: equal groups and fact families for operations; rows, columns and skip-counting for patterns; place-value units and exchanges for base-ten work. Check these before increasing complexity.

Materials: pencil, blank paper and the supplied reproducible tools. Optional large blocks support teaching; adults prepare any cut materials. All contexts are invented for instruction.

Read directions neutrally. Allow speech, signing, AAC, dictation and drawing. Enlarge print and offer breaks. Do not score handwriting, spelling or decoding. Record access supports separately from hints that supply a mathematical step.

Vocabulary: factor, product, divisor, quotient, equal groups, unknown, equation, pattern, estimate, expanded form and exchange. Invite learners to point, model and explain in a familiar language.

Fluency includes accuracy, efficiency and flexibility. For products, NC.3.OA.7 also requires memory. Observe initial answers before tools, then assess reasoning afterward. Do not invent a fixed speed cutoff or infer full fluency from multiple-choice recognition.

TEACHER GUIDE

Contents and bank navigation

Following these guide pages: visual models and reproducible tools; seven teaching scripts; choice bank; open performance bank; teacher-only worked keys; scoring and evidence records; source notes. Each page has a footer number; each task has a stable ID.

Warm-up: M01-M04 and O01-O04

I Do: M05-M08 and O05-O08

We Do: M09-M13 and O09-O13

Collaborative practice: M14-M18 and O14-O18

Independent practice: M19-M23 and O19-O23

Small-group reteach: M24-M27 and O24-O27

Exit ticket: M28-M30 and O28-O30

Give each learner their own response opportunity during partner work. Print only selected student pages. Keep worked examples, answers and answer-supplying support out of view during independent evidence collection.

WORKED TEACHER MODEL

Two stories, two equations

Story A: 4 boxes have 6 pencils each. Add 3 loose pencils.

Boxes: equal groups



$$(4 \times 6) + 3 = n$$

$$24 + 3 = 27 \text{ pencils}$$

Story B: 4 boxes have 6 pencils each. Add 3 pencils to EACH box.

Each group grows



$$4 \times (6 + 3) = n$$

$$4 \times 9 = 36 \text{ pencils}$$

The placement of the change matters. A diagram and equation must represent the same story; parentheses group the calculation done first.

REUSABLE STUDENT ORGANIZER

Plan two linked steps

Known quantities and the unknown (use a symbol)

Step 1: draw and calculate

Step 2: draw and calculate

Equation with unknown / answer in context / check

TEACHER GUIDE

Warm-up teaching script

Select M01 and O01; keep M02-M04 and O02-O04 for later evidence. Times are flexible teaching segments, not test limits.

1-2 minutes | Launch

Ask: "What happens first? What happens next? What are we trying to find?" Have learners retell both changes before choosing operations.

3-6 minutes | Elicit

Use O01 before the choice item when assessing independent performance. Ask: "What do the quantities mean? What will you show?" During I Do, think aloud; during We Do invite each next step; during independent/exit work remain neutral.

3-5 minutes | Examine evidence

Ask: "How does your representation match your equation? Why does that step work?" Listen for the specific target: Represent and solve a two-step problem using an unknown symbol.

2-4 minutes | Respond

If reasoning is unclear, ask for a new example or a check. After recording the initial response, use the model page to rebuild the relevant structure. Label this later work as supported; do not replace the first record.

1-3 minutes | Close

Record the exact response, strategy, representation, explanation and support. Extension: create a new example that uses the same structure and explain why it fits. Select a fresh item from this section to check transfer on another day.

TEACHER GUIDE

I Do teaching script

Select M05 and O05; keep M06-M08 and O06-O08 for later evidence. Times are flexible teaching segments, not test limits.

1-2 minutes | Launch

Model 4 boxes of 6 pencils plus 3 loose: $4 \times 6 = 24$; $24 + 3 = 27$. Write $(4 \times 6) + 3 = n$. Point to each story quantity.

3-6 minutes | Elicit

Use O05 before the choice item when assessing independent performance. Ask: "What do the quantities mean? What will you show?" During I Do, think aloud; during We Do invite each next step; during independent/exit work remain neutral.

3-5 minutes | Examine evidence

Ask: "How does your representation match your equation? Why does that step work?" Listen for the specific target: Represent and solve a two-step problem using an unknown symbol.

2-4 minutes | Respond

If reasoning is unclear, ask for a new example or a check. After recording the initial response, use the model page to rebuild the relevant structure. Label this later work as supported; do not replace the first record.

1-3 minutes | Close

Record the exact response, strategy, representation, explanation and support. Extension: create a new example that uses the same structure and explain why it fits. Select a fresh item from this section to check transfer on another day.

TEACHER GUIDE

We Do teaching script

Select M09 and O09; keep M10-M13 and O10-O13 for later evidence. Times are flexible teaching segments, not test limits.

1-2 minutes | Launch

Contrast $4 \times (6 + 3)$ with $(4 \times 6) + 3$. Ask whether three pencils are added to EACH box or only once. Model both separately.

3-6 minutes | Elicit

Use O09 before the choice item when assessing independent performance. Ask: "What do the quantities mean? What will you show?" During I Do, think aloud; during We Do invite each next step; during independent/exit work remain neutral.

3-5 minutes | Examine evidence

Ask: "How does your representation match your equation? Why does that step work?" Listen for the specific target: Represent and solve a two-step problem using an unknown symbol.

2-4 minutes | Respond

If reasoning is unclear, ask for a new example or a check. After recording the initial response, use the model page to rebuild the relevant structure. Label this later work as supported; do not replace the first record.

1-3 minutes | Close

Record the exact response, strategy, representation, explanation and support. Extension: create a new example that uses the same structure and explain why it fits. Select a fresh item from this section to check transfer on another day.

TEACHER GUIDE

Collaborative practice teaching script

Select M14 and O14; keep M15-M18 and O15-O18 for later evidence. Times are flexible teaching segments, not test limits.

1-2 minutes | Launch

Partners draw the first state and changed state. Each writes an equation with n , solves and tells what n means. They compare only after both have recorded.

3-6 minutes | Elicit

Use O14 before the choice item when assessing independent performance. Ask: "What do the quantities mean? What will you show?" During I Do, think aloud; during We Do invite each next step; during independent/exit work remain neutral.

3-5 minutes | Examine evidence

Ask: "How does your representation match your equation? Why does that step work?" Listen for the specific target: Represent and solve a two-step problem using an unknown symbol.

2-4 minutes | Respond

If reasoning is unclear, ask for a new example or a check. After recording the initial response, use the model page to rebuild the relevant structure. Label this later work as supported; do not replace the first record.

1-3 minutes | Close

Record the exact response, strategy, representation, explanation and support. Extension: create a new example that uses the same structure and explain why it fits. Select a fresh item from this section to check transfer on another day.

TEACHER GUIDE

Independent practice teaching script

Select M19 and O19; keep M20-M23 and O20-O23 for later evidence. Times are flexible teaching segments, not test limits.

1-2 minutes | Launch

Ask learners to choose the two operations and write an unknown equation without hints. Neutral rereading is allowed; do not emphasize keywords or name operations.

3-6 minutes | Elicit

Use O19 before the choice item when assessing independent performance. Ask: "What do the quantities mean? What will you show?" During I Do, think aloud; during We Do invite each next step; during independent/exit work remain neutral.

3-5 minutes | Examine evidence

Ask: "How does your representation match your equation? Why does that step work?" Listen for the specific target: Represent and solve a two-step problem using an unknown symbol.

2-4 minutes | Respond

If reasoning is unclear, ask for a new example or a check. After recording the initial response, use the model page to rebuild the relevant structure. Label this later work as supported; do not replace the first record.

1-3 minutes | Close

Record the exact response, strategy, representation, explanation and support. Extension: create a new example that uses the same structure and explain why it fits. Select a fresh item from this section to check transfer on another day.

TEACHER GUIDE

Small-group reteach teaching script

Select M24 and O24; keep M25-M27 and O25-O27 for later evidence. Times are flexible teaching segments, not test limits.

1-2 minutes | Launch

If only one step is solved, draw a blank three-part organizer: start, change, final. Ask the learner to place all story quantities before computing.

3-6 minutes | Elicit

Use O24 before the choice item when assessing independent performance. Ask: "What do the quantities mean? What will you show?" During I Do, think aloud; during We Do invite each next step; during independent/exit work remain neutral.

3-5 minutes | Examine evidence

Ask: "How does your representation match your equation? Why does that step work?" Listen for the specific target: Represent and solve a two-step problem using an unknown symbol.

2-4 minutes | Respond

If reasoning is unclear, ask for a new example or a check. After recording the initial response, use the model page to rebuild the relevant structure. Label this later work as supported; do not replace the first record.

1-3 minutes | Close

Record the exact response, strategy, representation, explanation and support. Extension: create a new example that uses the same structure and explain why it fits. Select a fresh item from this section to check transfer on another day.

TEACHER GUIDE

Exit ticket teaching script

Select M28 and O28; keep M29-M30 and O29-O30 for later evidence. Times are flexible teaching segments, not test limits.

1-2 minutes | Launch

Use a new story. Ask for an equation, both calculations, a labeled answer and a check that both events were used.

3-6 minutes | Elicit

Use O28 before the choice item when assessing independent performance. Ask: "What do the quantities mean? What will you show?" During I Do, think aloud; during We Do invite each next step; during independent/exit work remain neutral.

3-5 minutes | Examine evidence

Ask: "How does your representation match your equation? Why does that step work?" Listen for the specific target: Represent and solve a two-step problem using an unknown symbol.

2-4 minutes | Respond

If reasoning is unclear, ask for a new example or a check. After recording the initial response, use the model page to rebuild the relevant structure. Label this later work as supported; do not replace the first record.

1-3 minutes | Close

Record the exact response, strategy, representation, explanation and support. Extension: create a new example that uses the same structure and explain why it fits. Select a fresh item from this section to check transfer on another day.

STUDENT BANK

Choice practice 1-2

M01 A club has 4 boxes with 6 pencils in each. It gives away 9 pencils. How many pencils remain? Choose the final total.

A. 15

B. 1

C. 6

D. 14

Choose one. Explain your thinking to your teacher.

M02 There are 5 trays with 9 muffins on each tray. Each tray receives 7 more muffins. How many muffins are now on all trays? Choose the final total.

A. 87

B. 80

C. 81

D. 45

Choose one. Explain your thinking to your teacher.

STUDENT PERFORMANCE

001 | Warm-up

A library has 40 books on a cart. Staff add 18 books, then shelve 17 books from the cart. How many books are left on the cart? Write an equation using n for the unknown. Show both steps and explain what your answer means.

Unknown and equation

Step 1: model and calculate

Step 2: model and calculate

Answer in context and check

STUDENT PERFORMANCE

002 | Warm-up

A club has 58 craft sticks. It uses 13 sticks, then receives 12 more. How many craft sticks does it have now? Write an equation using n for the unknown. Show both steps and explain what your answer means.

Unknown and equation

Step 1: model and calculate

Step 2: model and calculate

Answer in context and check

TEACHER ONLY

M keys 1-2

M01: A. 15

$(4 \times 6) - 9 = n$. n means the final number asked for. $4 \times 6 = 24$ pencils initially. Then $24 - 9 = 15$ pencils remain. Check: both changes in the story are included, and the answer counts the requested objects.

Diagnostic follow-up: 1: Combines quantities without respecting groups or the two-step sequence. 6: Applies an additional subtraction of the changed quantity; track how many times the change occurs. 14: One object too few; check the arithmetic after choosing both operations.

M02: B. 80

$5 \times (9 + 7) = n$. n means the final number asked for. $9 + 7 = 16$ muffins on each tray. Then $5 \times 16 = 80$ muffins altogether. Check: both changes in the story are included, and the answer counts the requested objects.

Diagnostic follow-up: 87: Applies an additional addition of the changed quantity; track how many times the change occurs. 81: One object too many; check the arithmetic after choosing both operations. 45: Uses the wrong operation or ignores the change.

TEACHER ONLY

0 keys 1-2

001: 41

$(40 + 18) - 17 = n$. n means the final number asked for. $40 + 18 = 58$ books after adding. Then $58 - 17 = 41$ books on the cart. Check: both changes in the story are included, and the answer counts the requested objects.

Accept equivalent accurate models/equations and explanations. Evaluate the requested reasoning separately from the numerical answer.

002: 57

$(58 - 13) + 12 = n$. n means the final number asked for. $58 - 13 = 45$ sticks after use. Then $45 + 12 = 57$ sticks now. Check: both changes in the story are included, and the answer counts the requested objects.

Accept equivalent accurate models/equations and explanations. Evaluate the requested reasoning separately from the numerical answer.