

Coins and whole-dollar stories



NC.2.MD.8 | Solve word problems involving:

Quarters, dimes, nickels, and pennies within 99¢, using ¢ symbols appropriately.

Whole dollar amounts, using the \$ symbol appropriately.

Seven teaching sections; 30 choice items and 30 open/performance items; scripts, models, organizers, worked keys and evidence records.

Current implementation set: 2026-27 / 2027-28. Teach selected tasks across short sessions, not all 60 at once.

Free sample | Contents

NC.2.MD.8 | Second Grade mathematics

This sample contains 21 complete selected pages from the 84-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-17, 32-33, 64, 74

Representative activities

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

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

O01: sample PDF page(s) 19; original page(s) 32

O02: sample PDF page(s) 20; original page(s) 33

Selected teacher prompts and keys: original page(s) 64, 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

Exact standard and targets

NC.2.MD.8: Solve word problems involving:

Quarters, dimes, nickels, and pennies within 99¢, using ¢ symbols appropriately.

Whole dollar amounts, using the \$ symbol appropriately.

I can...

Solve quarter, dime, nickel and penny problems within 99¢.

Solve whole-dollar word problems.

Use ¢ and \$ in the right places and explain a model.

Collect: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Essential question: How can my model and explanation show what the numbers mean?

TEACHER GUIDE

Plan, materials, and access

Use four short sessions of about 20 minutes: (1) Warm-up and I Do; (2) We Do and begin collaboration; (3) finish collaboration and independent observations; (4) targeted reteaching and exit evidence. Split further when attention or access requires.

The bank is reusable. Each of the seven sections lists optional IDs and one core choice/open pair. Their times total about 80 minutes across sessions, not a single 60-item test. Print only selected student pages.

Prerequisites: Know penny 1¢, nickel 5¢, dime 10¢, quarter 25¢; count and add whole numbers. Review values with real coins when needed.

Materials: Large value-counter templates supplied here, paper, pencils; optional actual circulating coins under adult supervision. Labeled tokens model value and are not coin-recognition assessments.

Access: neutrally read directions; allow oral, signed, AAC, dictated, drawn, or child-directed manipulation. Enlarge diagrams if needed. Record access supports separately from mathematical hints. Handwriting, spelling and accent are not the construct.

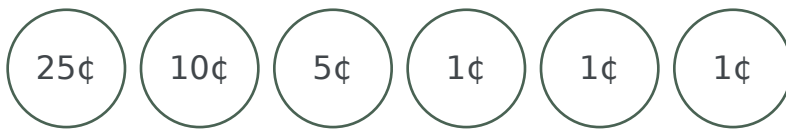
Safety: adults cut templates and supervise any real coins. Use large paper models instead of small objects when needed. No money changes hands in these invented classroom stories.

TEACHER GUIDE

Worked model and anchor

Say: "One quarter, one dime, one nickel and three pennies make $25 + 10 + 5 + 1 + 1 + 1 = 43$ cents. I write 43¢. If I spend 18¢, $43 - 18 = 25$, so 25¢ remains. In a separate whole-dollar story, \$24 plus \$15 is \$39. I keep cents and whole dollars separate; I do not write \$43¢."

Anchor: Read the story. Identify cents or whole dollars. Model value, not object count. Write an unknown-symbol equation. Solve. Write 43¢ or \$39, with only the appropriate symbol.



Labeled value counters; not images of actual coins.

TEACHER GUIDE

A second worked representation

Say: "These whole-dollar tokens show two \$10 amounts and four \$1 amounts, or \$24. The class receives \$15 more: $24 + 15 = 39$. I write \$39. If it instead spends \$15, $24 - 15 = 9$, so \$9 remains. The story tells me whether to join or subtract."

Value reference: penny 1¢; nickel 5¢; dime 10¢; quarter 25¢. A larger object is not necessarily worth more. These printed counters carry their values; they support problem solving, not recognition of coin designs.



Whole-dollar teaching tokens; not actual currency.

TEACHER GUIDE

Notice, reteach, and extend

If a child counts each coin as 1, trade a dime counter for ten large penny counters and compare equal value. If the child confuses \$ and ¢, sort separate whole-dollar and cent examples. Do not introduce decimal notation or mixed dollars-and-cents as a hidden requirement.

After reteaching, collect a different unused task without repeating the corrective cue. Ask, "Show how you know." Record the first response and any self-correction.

Three-session inquiry: First, create your own cent story and a separate whole-dollar story. Next, a partner solves it without the author explaining the answer. Finally, compare the model and result, revise any ambiguity, and explain the change. Keep both versions.

Authentic mathematical practices: make sense of the situation, choose a useful representation, explain a strategy, check precision, and critique a partner's reasoning respectfully. Speed is not a scoring dimension.

Keep models and response routes accessible.

Use the evidence dimensions later in the packet. MC recognition alone cannot establish the full standard; preserve actual drawings, models, statements and observation records.

TEACHER GUIDE

Warm-up | teaching script

Selected core: M01 and O01. Optional bank: M01-M04; O01-O04. About 8 minutes across short sessions.

0-2 min: Say, "What do you notice about the numbers and model?" Allow private noticing before naming a strategy.

2-5 min: Read M01 neutrally. Ask each learner to choose, then explain what the quantities mean.

5-8 min: Offer O01. Record initial model and explanation. Use errors to choose instruction, not to label ability.

Look/listen for: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Record first response, access support, mathematical cue, self-correction and next step. Early finishers create a different correct representation and explain why it agrees.

TEACHER GUIDE

I Do | teaching script

Selected core: M05 and O05. Optional bank: M05-M08; O05-O08. About 12 minutes across short sessions.

0-3 min: Display the worked model, with student bank pages face down. Say, "Watch how I connect the story to my model."

3-8 min: Say: "One quarter, one dime, one nickel and three pennies make $25 + 10 + 5 + 1 + 1 + 1 = 43$ cents. I write 43¢. If I spend 18¢, $43 - 18 = 25$, so 25¢ remains. In a separate whole-dollar story, \$24 plus \$15 is \$39. I keep cents and whole dollars separate; I do not write \$43¢."

8-12 min: Model M05 and O05 using the full keys. Explain why a tempting incorrect answer fails. Mark this demonstration as supported practice.

Look/listen for: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Record first response, access support, mathematical cue, self-correction and next step. Early finishers create a different correct representation and explain why it agrees.

TEACHER GUIDE

We Do | teaching script

Selected core: M09 and O09. Optional bank: M09-M13; O09-O13. About 15 minutes across short sessions.

0-3 min: Say, "Which information matters? What is unknown?" Invite different representations.

3-9 min: Solve M09 together. Have students test each proposal against the quantities or model.

9-15 min: Build O09 together, pausing before each decision. Ask one learner to show a step and another to explain it. End with an individual retelling.

Look/listen for: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Record first response, access support, mathematical cue, self-correction and next step. Early finishers create a different correct representation and explain why it agrees.

TEACHER GUIDE

Collaborative practice | teaching script

Selected core: M14 and O14. Optional bank: M14-M18; O14-O18. About 13 minutes across short sessions.

0-2 min: Assign maker and checker. Say, "Each person makes their own model and explanation."

2-8 min: Partners solve O14, then switch roles on O15. The checker rebuilds the argument; they do not simply copy.

8-13 min: Discuss M14. Ask, "What evidence rules out another choice?" Save separate work from both children.

Look/listen for: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Record first response, access support, mathematical cue, self-correction and next step. Early finishers create a different correct representation and explain why it agrees.

TEACHER GUIDE

Independent practice | teaching script

Selected core: M19 and O19. Optional bank: M19-M23; O19-O23. About 17 minutes across short sessions.

0-3 min: Provide neutral directions and agreed access tools. Say, "Show your own way. You can draw, talk, sign or build."

3-12 min: Collect O19 individually. If needed, use a fresh task with a different problem type; do not hint at the operation or hand position.

12-17 min: Use M19 as a secondary check. Record exact actions, equation, units or notation and explanation.

Look/listen for: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Record first response, access support, mathematical cue, self-correction and next step. Early finishers create a different correct representation and explain why it agrees.

TEACHER GUIDE

Small-group reteach | teaching script

Selected core: M24 and O24. Optional bank: M24-M27; O24-O27. About 10 minutes across short sessions.

0-2 min: Choose one documented misconception. Say, "Let us test what this model means."

2-6 min: If a child counts each coin as 1, trade a dime counter for ten large penny counters and compare equal value. If the child confuses \$ and ¢, sort separate whole-dollar and cent examples. Do not introduce decimal notation or mixed dollars-and-cents as a hidden requirement.

6-10 min: Fade the teaching prompt. Offer O24 and discuss M24; use another fresh item for independent evidence.

Look/listen for: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Record first response, access support, mathematical cue, self-correction and next step. Early finishers create a different correct representation and explain why it agrees.

TEACHER GUIDE

Exit ticket | teaching script

Selected core: M28 and O28. Optional bank: M28-M30; O28-O30. About 5 minutes across short sessions.

0-1 min: Make materials accessible. Read the task once without mathematical emphasis.

1-4 min: Collect O28; add M28 only if useful. Ask, "How does your model show your answer?"

4-5 min: Record one next teaching step. Mark inaccessible, unobserved or insufficient evidence N/O and arrange a new opportunity.

Look/listen for: An individual mixed-coin/cent solution and whole-dollar solution, model/equation, appropriate notation, and explanation of the story operation.

Record first response, access support, mathematical cue, self-correction and next step. Early finishers create a different correct representation and explain why it agrees.

STUDENT RESOURCE

Reusable thinking organizer

What is known? What is unknown?

My model / representation

My equation or written time

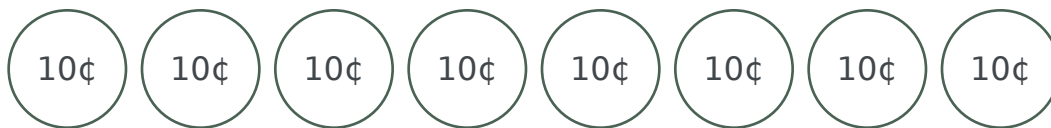
My explanation and check

Large value counters

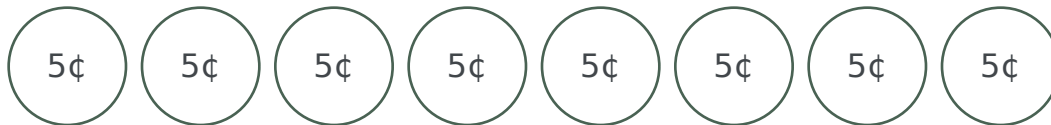
Labeled teaching models, not actual currency.



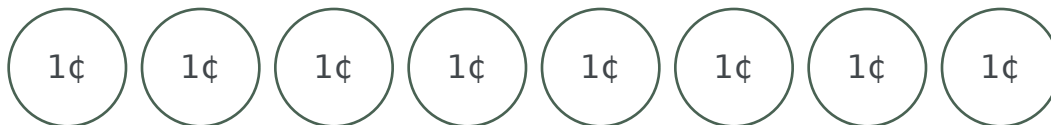
Labeled value counters; not images of actual coins.



Labeled value counters; not images of actual coins.



Labeled value counters; not images of actual coins.



Labeled value counters; not images of actual coins.

ADULT CUTS | STUDENT RESOURCE

Whole-dollar tokens

Labeled teaching models, not actual currency.



Whole-dollar teaching tokens; not actual currency.



Whole-dollar teaching tokens; not actual currency.



Whole-dollar teaching tokens; not actual currency.



Whole-dollar teaching tokens; not actual currency.

STUDENT CHOICE PRACTICE

M01 and M02**M01 | Warm-up**

A club has \$37. It buys paper for \$24. How much remains?

- A. \$13
B. \$24
C. \$37
D. \$61

M02 | Warm-up

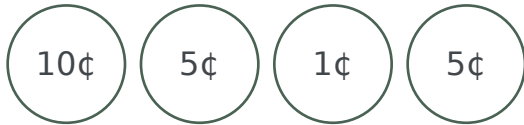
Noah has 26¢. He spends 9¢ on a sticker. How much is left?

- A. 17¢
B. 35¢
C. 9¢
D. 26¢

STUDENT PERFORMANCE | KEEP YOUR OWN WORK

001 | Warm-up

Inez puts the coins shown into her jar. How much money does she put in? Show a model. Write an equation with ? for the unknown. Solve and explain.



Labeled value counters; not images of actual coins.

My model

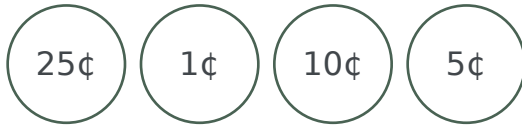
My equation and answer

My explanation and check

STUDENT PERFORMANCE | KEEP YOUR OWN WORK

002 | Warm-up

Inez puts the coins shown into her jar. How much money does she put in? Show a model. Write an equation with ? for the unknown. Solve and explain.



Labeled value counters; not images of actual coins.

My model

My equation and answer

My explanation and check

TEACHER ONLY | KEEP SEPARATE

M01-M03 | worked keys

M01 - A. \$13

$37 - 24 = 13$. Answer: \$13. Subtract to find the money left or the extra money needed. Write \$ before the whole-dollar amount. No cents or decimals are needed.

Distractors: B. \$24: Report the other known part or jump amount. C. \$37: Report the known start, whole, or first part without solving. D. \$61: Use addition instead of subtraction.

Target: Solve whole-dollar problems using \$

M02 - A. 17¢

$26 - 9 = 17$. Answer: 17¢. Subtract to find the money left or the extra money needed. Write ¢ after the cent amount; do not also add a dollar sign.

Distractors: B. 35¢: Use addition instead of subtraction. C. 9¢: Report the other known part or jump amount. D. 26¢: Report the known start, whole, or first part without solving.

Target: Solve cent problems within 99 cents using ¢

M03 - C. \$33

$26 + 7 = 33$. Answer: \$33. The story joins amounts. Write \$ before the whole-dollar amount. No cents or decimals are needed.

Distractors: A. \$7: Report the other known part or jump amount. B. \$19: Use subtraction instead of addition. D. \$26: Report the known start, whole, or first part without solving.

Target: Solve whole-dollar problems using \$

TEACHER ONLY | KEEP SEPARATE

001-003 | worked keys

001 - expected performance

$10 + 5 + 1 + 5 = 21$. Answer: 21¢. Add each coin value, not the number of coins. Write ¢ after the cent amount; do not also add a dollar sign. Unknown equation: $10 + 5 + 1 + 5 = ?$. Sample model: Group the shown values and label their total 21¢.

Accept equivalent correct models/equations and oral, signed or dictated explanations. Look for the actual performance; a correct answer without the required representation is incomplete evidence.

Target: Solve mixed quarter/dime/nickel/penny value problems within 99 cents

002 - expected performance

$25 + 1 + 10 + 5 = 41$. Answer: 41¢. Add each coin value, not the number of coins. Write ¢ after the cent amount; do not also add a dollar sign. Unknown equation: $25 + 1 + 10 + 5 = ?$. Sample model: Group the shown values and label their total 41¢.

Accept equivalent correct models/equations and oral, signed or dictated explanations. Look for the actual performance; a correct answer without the required representation is incomplete evidence.

Target: Solve mixed quarter/dime/nickel/penny value problems within 99 cents

003 - expected performance

$25 + 1 + 5 + 25 + 10 + 1 = 67$. Answer: 67¢. Add each coin value, not the number of coins. Write ¢ after the cent amount; do not also add a dollar sign. Unknown equation: $25 + 1 + 5 + 25 + 10 + 1 = ?$. Sample model: Group the shown values and label their total 67¢.

Accept equivalent correct models/equations and oral, signed or dictated explanations. Look for the actual performance; a correct answer without the required representation is incomplete evidence.

Target: Solve mixed quarter/dime/nickel/penny value problems within 99 cents