

4C Math Mastery Homeschooling Guide for Primary Mathematics Grade 4

This guide is a supplement to your Home Instructor's Guide or Teacher's Guide to help you utilize planning in 10 minutes or less. Use this document with the listed videos and resources in the Teachable course format. For questions on the 4C Math Mastery Model, check the course content. Please note that this is a working document that will be updated as needed.

Chapter 2: Addition and Subtraction

Day 1: Chapter Opener/Recall

Please refer to the CONNECT portion of the 4C Math Mastery Model to see how to prepare your student for the chapter.

Day 2: 2A Add Multi-Digit Whole Numbers

Connect	Opening Question: How does place value help you add multi-digit numbers without and with renaming? Opening Task: Student Book pg. 41 Manipulatives: place value chips, place value chart
Communicate	Learn pg. 41 Point Out: - At this point, students should be able to add using the standard algorithm. Use the place value chips to ensure that your student understands the meaning of regrouping in a greater place. - Note: regrouping refers to the physical action of changing the place value chips. Renaming refers to what you do when you are writing the algorithm and you draw a 1 to represent a ten. Manipulatives: place value chips
Collaborate	Learn Together pg. 42-44 Point Out: - Problems will be written horizontally to encourage your student to read numbers naturally. It is a strategy to write them vertically. If students need support lining digits up, use grid paper to record each digit in a place to do the addition in a place value chart. - The Activity can be completed using place value chips or a place value chart. Challenge your student to come up with a number that would require regrouping in one or more places.
Comprehend	Closing Question: How does place value help you add multi-digit numbers without and with renaming? Practice On Your Own pg. 44 Video: PM Exclusive: Missing Digits in 6-Digit Addition (THINK pg. 44) Workbook, Reteach, Extension options

All opening questions are taken directly from Primary Mathematics 2022 Home Instructor's Guide with permission.

Day 3: 2B Subtract Multi-Digit Whole Numbers

Connect	Opening Question: How does place value help you subtract multi-digit numbers without and with renaming? Opening Task: Student Book pg. 45 Manipulatives: place value chips, place value chart
Communicate	Learn pg. 45 Point Out: • This problem requires A LOT of renaming. Ensure your student understands what's happening each time using the place value chips and the standard algorithm. • At this point, the student should be able to do this fluently with the standard algorithm, but the chips may be used to lend support. Manipulatives: place value chips, place value chart
Collaborate	Learn Together pg. 46-48 Point Out: • This lesson follows the same format as the previous lesson. See the notes from that lesson about the language and the use of manipulatives. • The Activity is a good one to encourage your student to consider what numbers need to be included to require renaming.
Comprehend	Closing Question: How does place value help you subtract multi-digit numbers without and with renaming? Practice On Your Own pg. 48 Video: PM Exclusive: Missing Digits in 6-Digit Subtraction (THINK pg. 48) Workbook, Reteach, Extension options

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Day 4: 2C Word Problems (1)

Connect	Opening Question: How do you use part-whole models and comparison models to solve one-step word problems involving addition and subtraction? Opening Task: Student Book pg. 49 Manipulatives: place value materials, grid paper to draw bar models TEACHER TIP: Students may not need to use the place value materials but provide them just in case. Encourage your student to draw a visual model, such as a bar model, to show why the operation is subtraction.
Communicate	Learn pg. 49-50 Point Out: • Note the way the bar model is drawn as a part-whole model. Encourage students to see how the two parts make the whole. Then, encourage students to use a method to find the answer. • Remind students that they should check their answer to make sure it's reasonable. Manipulatives: grid paper for bar models

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Collaborate	Learn Together pg. 50-51 Point Out: • #1 is a comparison model. Students will need to identify the difference. • You can cover up the bar model and encourage your student to draw his/her own model or use the one in the book. • The Activity challenges your student to create a word problem. Do not skip this.
Comprehend	Closing Question: How do you use part-whole models and comparison models to solve one-step word problems involving addition and subtraction? TEACHER TIP: During Independent Practice, you can decide whether you want your student to draw the bar models. I would gauge it on how well your student understands the operation. If he/she cannot tell why he/she chose addition or subtraction, I would encourage the student to draw the model. Practice On Your Own pg. 51-52 Workbook, Reteach, Extension options
Bonus	This is a good time to begin reviewing multiplication and division math facts. Spend 5 minutes each day challenging your student to remember the math facts by playing a game.

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Day 5: 2C Word Problems (2)

Connect	Opening Question: How do bar models help you solve two-part word problems? Opening Task: Student Book pg. 53 Manipulatives: place value chips, grid paper for bar models
Communicate	Learn pg. 53-54 Point Out: • A two-part problem has an a and a b. Sometimes those can be drawn in the same model or they can be drawn as two separate models. Encourage your student to study why a has to be completed before b. • Be sure to encourage your student to check that the answer is reasonable. • Place value materials can be used if a student is struggling with the operation. Manipulatives: grid paper for bar models
Collaborate	Learn Together pg. 54-55 Point Out: • All of these include bar models already drawn. You can encourage your student to use the Student Book or draw on grid paper. You can even do a combination of both.

	Video: Word Problems: Bar Models: 2-Step Subtraction Word Problems
Comprehend	Closing Question: How do bar models help you solve two-part word problems? Practice On Your Own pg. 56-58 TEACHER TIP: During Independent Practice, you can decide whether you want your student to draw the bar models. I would gauge it on how well your student understands the operation. If he/she cannot tell why he/she chose addition or subtraction, I would encourage the student to draw the model. Workbook, Reteach, Extension options
Bonus	This is a good time to begin reviewing multiplication and division math facts. Spend 5 minutes each day challenging your student to remember the math facts by playing a game.

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Day 6:2C Word Problems (3)

Connect	Opening Question: How do you decide which part of the problem to represent in a bar model? Opening Task: Student Book pg. 59 Manipulatives: place value chips, grid paper for drawing bar models
Communicate	Learn pg. 59-60 Point Out: • This is a multi-step problem. Students may need to draw more than one bar model to show the relationship and the operation. Encourage your student to think through the problem and take it one sentence at a time. • Remind your student to check that the answer is reasonable. • You can still provide place value materials if needed. However, if your student is still struggling with the action of adding and subtracting, consider stopping here and doing some remediation work. Manipulatives: grid paper for drawing bar models
Collaborate	Learn Together pg. 60-61 Point Out: • These are multi-step problems. Students will have a model drawn in #1. This can be used or students can draw their own. • A bar model is not provided for #2. Encourage students to draw one. See the Answer Key for the bar model picture.
Comprehend	Closing Question: How do you decide which part of the problem to represent in a bar model? Practice On Your Own pg. 61-62 Video: PM Exclusive: Solving Multi-Step Word Problems with Addition and Subtraction (THINK pg. 62)

	Workbook, Reteach, Extension options
Bonus	This is a good time to begin reviewing multiplication and division math facts. Spend 5 minutes each day challenging your student to remember the math facts by playing a game.

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Day 7: Chapter Wrap Up and Performance Task

Chapter Wrap Up is a great way for students to jot down everything they remember. Refer to the Primary Mathematics series videos that highlight how this looks at the beginning of the course under *Using Primary Mathematics* to see what this looks like.

Students should be able to complete the Performance Task with little assistance. However, use the question prompts to encourage your student to explain his/her thinking.

Day 8: STEAM (optional)

Days 9-10: Chapter Practice

Encourage students to complete this independently. However, use the provided question prompts to encourage your student to explain his/her thinking.

Video: PM Exclusive: Evaluating a Multi-Step Word Problem (pg. 68)

Days 11-14: Chapter Test (optional) and Cumulative Assessment (optional)

Day 15: Heuristics

Follow the 4-step problem solving method to complete the example on page 69. Use the video to help students work through the problem

Video: PM Exclusive: Use Before-After Concept

Then, encourage students to solve the 2 practice problems. Note that students may choose to use an alternate method.