

Chapter 5 - 2-Digit Subtraction

Overview & Support

Standards:

Use place value understanding and properties of operations to add and subtract.

- 2.NBT.5: Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.9: Explain why addition and subtraction strategies work, using place value and the properties of operations.

Represent and solve problems involving addition and subtraction.

- 2.OA.1: Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Strategies for Addition and Subtraction

Examples of addition strategies based on place value for $48 + 37$:

- Adding by place value: $40 + 30 = 70$, $8 + 7 = 15$, and $70 + 15 = 85$
- Incremental adding (by tens and ones): $48 + 10 = 58$, $58 + 10 = 68$, $68 + 10 = 78$, and $78 + 7 = 85$
- Composing and decomposing (making a "friendly" number): $48 + 2 = 50$, $37 - 2 = 35$, and $50 + 35 = 85$

Examples of subtraction strategies based on place value for $81 - 37$:

- Adding up (from smaller number to larger number): $37 + 3 = 40$, $40 + 40 = 80$, $80 + 1 = 81$, and $3 + 40 + 1 = 44$
- Incremental subtracting: $81 - 10 = 71$, $71 - 10 = 61$, $61 - 10 = 51$, $51 - 7 = 44$
- Subtracting by place value: $81 - 30 = 51$, $51 - 7 = 44$

Resources to Support Number Sense Building Routines:

<https://tedd.org/mathematics/>

Quick Images

Counting Collections

Choral Countings

Number Strings

Number Talks by Sherry Parrish (several books available at site)

Manipulatives:

Base ten blocks

connecting cubes

counters

open number lines

Vocabulary:

subtract difference tens ones regroup digit

bar model number sentence equation

compensation decomposing composing

Strategies for Chapter:

- Using the standard algorithm is not the focus of these lessons. Students should know how to break apart 1 ten as 10 ones, and may be exposed to the algorithm, but are not expected to master it. It is recommended that teachers focus on strategies that build understanding of place value such as quick pictures, compensation, decomposition, and partial sums.
- ***Since the standard algorithm isn't mastered until 4th grade and this lesson isn't supported by the CA Framework, it is highly recommended that teachers focus on the place value of the numbers. Have students subtract the tens and the ones without lining the problem up vertically. Refer to other strategies.**
- Expanded form using number and word forms
- Bar models

Color Coding:

Green (G) - The lesson accurately reflects the Framework standard(s).

Yellow (Y) - This lesson includes notes to refer to while planning the lesson.

Red (R) - This lesson does not accurately reflect the Framework standard(s). Skip the lesson.

Essential Question:

How do you use place value to subtract 2-digit number with and without regrouping?

Lesson-by-Lesson Overview:

Lessons 4 & 5 are **Yellow** - notes included.

Lesson 7 is **Red** - notes included.

Lesson #, Standard	Title	Materials	Vocab	Suggested Routines (to be used throughout the unit)	Notes

Show What You Know				Link to Math Framework: https://cpb-us-w2.wpmucdn.com/blogs.egusd.net/dist/3/1081/files/2015/09/Grade-2-28wkzve.pdf (pp. 19-22)	
5.1 G 2.NBT.5	Algebra-Break Apart Ones to Subtract	Number line,	Ones, Subtract, Difference		Call students' attention to making a friendly number to help with subtraction
5.2 G 2.NBT.5	Break Apart Numbers to Subtract	Number line,	Tens, Ones	Number Talks: Categories 1-3: Removal pp. 150-154	*Subtract using expanded form. Use open number lines.
5.3 G 2.NBT.5	Model Regrouping Through Subtraction	Ten frames, Base 10 blocks	Regroup	Number Sense Routines (continue): See Number Sense PDF linked here for routines suggested below: https://www.stenhouse.com/sites/default/files/public/legacy/pdfs/number_sense_ch2.pdf	* Use base ten blocks to model regrouping prior to paper/pencil. *Look at <i>common errors</i> on teacher book page 238.
5.4 Y 2.NBT.5	Model and Record 2-Digit Subtraction	Base 10 blocks, Place value chart	Place value chart		*Model items using base ten blocks and quick pictures vs. standard algorithm
5.5 Y 2.NBT.5; 2NBT.9	2-Digit Subtraction	Base 10 blocks, Place value chart		Also see Fluency Builders in <i>Go Math!</i> SVMI Tasks: Not applicable EL Strategies: Refer to EL strategies throughout unit Math Talk: Make sure to refer to this section to encourage student dialogue and understanding (found on 1st page of every <i>Go Math!</i> lesson)	*Continue practicing subtraction with regrouping using strategies that support Math Framework (quick pictures, base ten blocks, etc.) vs. standard algorithm *If sending home Standards Practice page, modify by having students use paper to draw quick pictures or use open number line.

				Pages 245 and 248 meet standard; pgs. 246-247 Items #1-15 focus on standard algorithm.
5.6 Y 2.NBT.5	Practice 2-Digit Subtraction	Base 10 blocks, Place value chart		**If sending home Standards Practice page, modify by having students use paper to draw quick pictures or use open number line.

Mid Chapter Checkpoint

*Do not give Mid-Chapter Checkpoint as problems 3-7 focus on standard algorithm. Do alternate assessment or modify directions.

Using Formative Feedback – Correct the Mid-Chapter Checkpoint and use the data for:

- Math centers or math games focused on standards of need
- Small group instruction focused on a single standard/common error
- Whole group instruction focused on a single standard/common error
- My Favorite No – Rewrite student work with an error and work as a class to identify positives in the work and areas that need to be revised
- Select 1 – 3 problems to resolve in their groups and discuss whole class (do not just review the checkpoint item by item – this is not very engaging. We want new learning to occur on this day that helps students over misconceptions.

5.7 Y 2.NBT.5	Rewrite 2-Digit Subtraction	Base 10 blocks, Place value chart	Digit, Tens, Ones	*Continue practicing 2-digit subtraction as needed using appropriate strategies highlighted in Math Framework
5.8 G 2.NBT.5	Add to Find Differences	Base 10 blocks, Number line	Difference	
5.9 G 2.OA.1; 2NBT.5	Problem Solving: Subtraction	Bar Models		Use Read 2 Ways Strategy for deeper understanding of

					problem's question: http://blogs.egusd.net/mathgen/what-is-math-generation/read-two-ways/
5.10 G 2.OA.1; 2.NBT.5	Write Equations to Represent Subtraction	Base 10 blocks	Equation, Number Sentence		Continue to use Read 2 Ways Strategy
5.11 G 2.OA.1; 2.NBT.5	Solve Multi-Step Problems	Bar Models			Continue to use Read 2 Ways Strategy Refer to p. 9 Math Framework for multi-step problems

End of Chapter Assessment

If using Chapter 5 Review/Test from the Student Go Math Book: **Questions 8, 9, and 14 – Draw on paper instead of using the standard algorithm**

Summative Assessment is also available in online Assessment Guide.

Reteach Options	<p>Look over your Chapter 5 Assessment to determine standards/areas of need/common errors. Reteach standards from this unit to help meet students' need. Some ideas for reteach activities are listed below:</p> <ul style="list-style-type: none"> ● *Have students practice their "Make a 10" strategy daily using cards with 1, 2, 3, 4, 5 5 6, 7, 8, 9 for each student. Use it as a warm up where each student matches the pairs to "Make a 10". ● *Use triangle Fact Family cards to practice addition and subtraction for fluency. ● Math centers or math games focused on unit standards ● Small group instruction focused on a single standard ● Whole group instruction focused on a single standard ● My Favorite No – Rewrite student work with an error and work as a class to identify positives in the work and areas that need to be revised ● Select 1 – 3 problems to resolve in their groups and discuss whole class (do not just review the test item by item – this is not very engaging. We want new learning to occur on this day that helps students over misconceptions. ● Complete the "Performance Task" from Go Math! In the Assessment Book in small groups. Share strategies and discuss whole class. <p>Use the Reteach activities based on standards that need intervention.</p>
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