



## Unit Plan

### 2.9 Putting It All Together

Chester / Littleville Elementary / Grade 2 / Mathematics

[↑](#) Week 2 - Week 4 | 4 Curriculum Developers | Last Updated: Apr 20, 2023 by Hyjek, Linda[Style Guide](#)

## What is the purpose of the unit? What are the major take-aways?

### Standards

#### MA: Mathematics (2017)

#### MA: Grade 2

#### Operations & Algebraic Thinking

##### 2.OA Add and subtract within 20.

- 2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two single-digit numbers and related differences. [Show Details](#)

#### Number & Operations in Base Ten

##### 2.NBT Understand place value.

- 3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

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

- 5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

#### Measurement & Data

##### 2.MD Measure and estimate lengths in standard units.

- 4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
- 1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

##### 2.MD Relate addition and subtraction to length.

- 5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

##### 2.MD Represent and interpret data.

- 9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Organize and record data on a line plot (dot plot) where the horizontal scale is marked off in whole-number units.

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## Enduring Understandings

- Fluently add and subtract within 20.
- Add and subtract within 1,000 using strategies based on place value and the properties of operations.
- Fluently add and subtract within 100.
- Represent and solve one- and two-step story problems within 100.

## Essential Questions

## Content

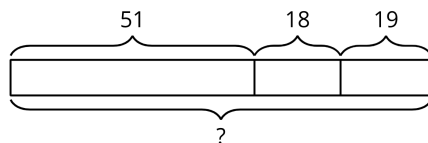
In this unit, students revisit major work and fluency goals of the grade, applying their learning from the year.

Section A gives students a chance to solidify their fluency with addition and subtraction within 20. In section B, students apply methods they used with smaller numbers to add and subtract numbers within 100. They also revisit numbers within 1,000: composing and decomposing three-digit numbers in different ways, and using methods based on place value to find their sums and differences.

In the final section, students interpret, solve, and write story problems involving numbers within 100, which further develop their fluency with addition and subtraction of two-digit numbers. They work with all problem types with the unknown in all positions.

*Clare picked 51 apples. Lin picked 18 apples. Andre picked 19 apples.*

*Here is the work a student shows to answer to a question about the apples.*



$$51+19=70 \quad 51+19=70 \quad 70+18=88 \quad 70+18=88$$

*What is the question?*

The sections in this unit are standalone sections, not required to be completed in order. The goal is to offer ample opportunities for students to integrate the knowledge they have gained and to practice skills related to the expected fluencies of the grade. Throughout the unit

Here is a sampling of warm-ups in the unit that provide an invitation for students to think about the topics addressed within each section: fluency within 20, numbers to 1,000, and story problems.

## Skills

### Section A Goals

- Fluently add and subtract within 20.

### Section B Goals

- Add and subtract within 1,000 using strategies based on place value and the properties of operations.
- Fluently add and subtract within 100.

### Section C Goals

- Represent and solve one- and two-step story problems within 100.

lesson 1	lesson 5	lesson 10
Number Talk 10-510-5 11-511-5 12-612-6 13-613-6	What Do You Know About ____? What do you know about 308?	Notice and Wonder In the park, there are 37 kids on the soccer field, 18 kids on the tennis courts, and 25 kids at the picnic tables. What do you notice? What do you wonder?

## How will you gauge student learning?

### Assessments

2.9 Putting It All Together End of Unit Assessment | Summative | Written Test

[Grade2-9-End-of-Course-Assessment-and-Resources-assessment.pdf](#)

9 State Standards Assessed

## How will students learn?

### Learning Activities

Section A:

In this section, students practice adding and subtracting within 20 to meet the fluency expectations of the grade, which include finding all sums and differences within 20, and knowing from memory all sums of 2 one-digit numbers.

Students begin with exercises and games that emphasize using the relationship between addition and subtraction to find the value of expressions and unknown addends. When students encounter sums and differences they don't know right away, they use mental math strategies and other methods they have learned, such as using facts they know, making equivalent expressions, and composing or decomposing a number to make a 10.

Later in the section, students apply their mental strategies to find sums and differences within 20 in a measurement context. They measure standard lengths and create line plots, and then use the measurements to add and subtract.

group	length of pencils in cm				total length
A	8	13	12	7	
B	9	15	7	10	
C	12	13	8	6	
D	9	9	11	13	
E					

Use the pencil measurements to create a line plot.



Section B:

In this section, students revisit numbers within 1,000 and develop their facility with addition and subtraction within 100. The work here requires students to compose and decompose multiple place-value units, which reinforces their understanding of place value and operations on larger numbers.

Students begin by decomposing and composing three-digit numbers in multiple ways using base-ten blocks, base-ten diagrams, words, and symbols. They also compose and decompose units as they match and create equivalent expressions for three-digit numbers.

Find the number that makes each equation true.

$$6 \text{ hundreds} + 9 \text{ ones} = 5 \text{ hundreds} + \underline{\hspace{2cm}} \text{ tens} + 9 \text{ ones}$$

$$2 \text{ hundreds} + 9 \text{ tens} + 17 \text{ ones} = \underline{\hspace{2cm}} \text{ hundreds} + 7 \text{ ones}$$

Next, students practice addition and subtraction within 1,000. They analyze sums and differences and reason about which ones are more difficult to evaluate and which are easier, deepening their understanding of composition and decomposition based on place value. Students then work toward fluent addition and subtraction within 100, which requires composing or decomposing one unit when using methods based on place value. Methods for finding sums and differences mentally, without explicitly composing or decomposing units, are also encouraged.

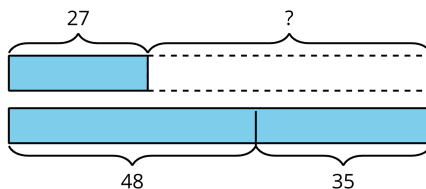
#### Section C:

In this section, students create and solve one- and two-step story problems with unknown values in all positions. They discuss how they make sense of the problem and share their methods for solving.

By now, students are expected to solve all types of story problems within 100, using methods and representations that make sense to them. They continue to make connections across representations, with a focus on equations and tape diagrams, which will be used frequently in grade 3.

Students analyze stories and determine the types of questions that could be asked based on the provided information. Then, they write their own story problems based on images and their own experiences.

Write and solve a story problem the diagram could represent.




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Differentiated Instruction

Technology Integration

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21st Century Skills

Positive Behavior

CASEL


Collaborative for Academic, Social, and Emotional Learning

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Resources

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Teacher Notes and Reflections

 Math Unit Nine Adjustments/Notes 