Unit 2 - Fluently Add/Subtract, Measurement

Content Area: **Math**
Course(s):
Time Period: **Full Year**
Length: **Full Year**
Status: **Published**

Unit Overview

Enduring Understandings

Use models, drawings and equations to illustrate additions.
Learn that number can be broken apart in many ways as the sum of two numbers.
The equal sign (=) is a symbol that means the amount on one side is the same as the amount on the other side.
Use addition strategies to solve two-step word problems.
Use the counting on, counting back, make 10, and use addition strategies to subtract within 20.
Represent and solve 2-digit subtraction equations.
Solve one- and two-step word problems involving subtraction.
Measure length in customary and metric units.
Compare lengths in customary and metric units.
Examine the relationship among inches, feet, and yards and between centimeters and meters.
Estimate length in customary and metric units.
Solve word problems involving length.

Essential Questions

What strategies can I use to add 2-digit numbers?
What strategies can I use to subtract 2-digit numbers?
How can I estimate and measure length in standard units?

Learning Objectives

Add fluently within 20.
Represent addition of 2-digit numbers to find the sum.
Understand that addends added in any order have the same sum.
Decompose two addends to add.
Use a number line to add.
Decompose one addend to add.
Adjust addends to add.
Add up to four 2-digit numbers.
Solve one- and two-step addition word problems.
Represent and solve 2-digit subtraction equations that require no regrouping.
Represent and solve 2-digit subtraction equations that require regrouping.
Use a number line to subtract.

Decompose one number by place value to subtract 2-digit numbers.
Adjust numbers to subtract.
Use addition to solve 2-digit subtraction equations.
Solve one-step word problems within 100.
Solve two-step word problems within 100.
Measure the length of objects in inches.
Measure the length of objects in feet and yards.
Determine the difference in length of two objects measures with the same unit.
Explain the relationship between inches, feet, and yards.
Use everyday objects with lengths similar to inches and feet to estimate lengths.
Measure the length of objects in centimeters and meters.
Explain the relationship between centimeters and meters.
Use every object with lengths similar to centimeters and meters to estimate length.
Solve addition and subtraction word problems involving length.
Use number lines to solve addition and subtraction word problems involving length.

Standards: Content

2.OA	Operations and Algebraic Thinking
2.OA.A	Represent and solve problems involving addition and subtraction
2.OA.A.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.
2.NBT.A	Understand place value
2.NBT.B	Use place value understanding and properties of operations to add and subtract
2.NBT.B.5	With accuracy and efficiency, add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
2.NBT.B.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.
2.NBT.B.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.
2.M	Measurement
2.M.A	Measure and estimate lengths in standard units
2.M.A.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2.M.A.2	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
2.M.A.3	Estimate lengths using units of inches, feet, centimeters, and meters.
2.M.A.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

2.M.B	Relate addition and subtraction to length
2.M.B.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.M.B.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Standards: Interdisciplinary

9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
8.1.2.NI.2	Describe how the Internet enables individuals to connect with others worldwide.
9.1.2.PB.1	Determine various ways to save and places in the local community that help people save and accumulate money over time.
9.1.2.PB.2	Explain why an individual would choose to save money.
8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.1.2.AP.2	Model the way programs store and manipulate data by using numbers or other symbols to represent information.
9.4.2.TL.1	Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
9.4.2.TL.7	Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2).

Assessment Evidence

Formative	Collaborative Activities, Homework, Daily Classwork, Discussion, Independent Class Assignment, Informal Observations of Students, Games, Exit Slips, Questioning, Teacher Made Pages, Learning Centers, Problem of the Day, Reveal Workbooks, Fluency Checks, Curious, Activity Based Exploration, Guided Exploration, On My Own.
Summative	Tests, Mid-Chapter Checkpoint assessments, teacher generated assessments
Alternative & Benchmark	Alternative – Reteaching, One on One Conferencing, Learning Centers, student portfolio of assignments, Homework, Higher Order Thinking Problems, Additional leveled practice, orally administered assessments. Benchmark - LinkIt Benchmark Assessments, Totowa TPA
Assessment Evidence Resource	

Instructional Resources

Smartboard, Computers, websites and digital interactives/models, Multi-media presentations, video streaming, Brain Pop, Microsoft 365, Primary and Secondary Source Documents, Reveal, Resources, manipulatives, post-it notes, markers, number lines, chart & graph paper, construction paper, glue, scissors, paperclips, crayons, envelopes, dot ink & cards, geo blocks, number cubes/dice.

Instructional Resource List

Curricular Mandates

Below are the curricular requirements as defined in NJ Administrative Code and Statute

	Amistad		Diversity, Equity, and Inclusion
	Holocaust		LGBT and Disabilities (Grades 6-12)
	Climate Change		Asian American & Pacific Islander

Social Emotional Learning (SEL) Competencies

NJ Social and Emotional Learning Competencies & Sub-Competencies

X	Self-Awareness	X	Relationship Skills
X	Responsible Decision-Making	X	Social Awareness
X	Self-Management		

21st Century Skills & Themes

	Global and Cultural Awareness	X	Technology Literacy		Planning and Budgeting
X	Creativity and Innovation		Financial Institutions		Risk Management and Insurance
	Information and Media Literacy		Digital Citizenship		Economic and Government Influences

X	Critical Thinking and Problem Solving		Credit Profile		Career Awareness and Planning
	Civic Financial Responsibility		Financial Psychology		