Unit 4 - Subtraction, Data Analysis & Equal Shares

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

Unit Overview

Enduring Understandings

Understand how to find 10 less than a number.
Explain the patterns they see when finding 10 less.
Understand and explain how to use blocks and drawings to subtract tens.
Understand and explain how to use a number chart and number lines to subtract tens.
Understand how to use and explain how to use addition to subtracts tens.
Be able to explain how to use known addition facts to subtract tens.
Understand and explain the strategies used to determine the difference of a multiple of 10 from a larger multiple of 10.
Understand how to compare and order objects by length.
Understand how to compare the lengths of two objects by using a third object.
Able to express the length of an object as a number of length units.
Understand how to determine the length of an object using two different -sized units.

Essential Questions

What strategies help me subtract 2-digit numbers?
How can I use tools to measure and interpret data?
What are equal shares?

Learning Objectives

Students use mental math to find 10 less than a given 2-digit number and explain their reasoning.
Students use place value to subtract a multiple of 10 from larger multiples of 10.
Students use a number chart and an open number line to subtract a multiple of 10 from a larger multiple of 10.
Students use a known addition equation to find the difference of a multiple of 10 from larger multiples of 10 and explain their reasoning.
Students explain the strategies they used to determine the difference of a multiple of 10 from larger multiples of 10.
Students compare and order objects by length.
Students compare the lengths of two objects by comparing them to a third object.
Students determine the length of an object using same-size length units.
Students determine the length of an object using two different sized units and compare the number of units.
Students tell time using analog and digital clocks and write time to the hour.

Students tell time using analog and digital clocks and write time to the half hour.
Students organize data with up to three categories.
Students organize data using a tally chart to record the total number of objects in each category.
Students organize data using a tally charts and interpret data by answering “how many” questions.
Students solve problems involving comparisons by interpreting data.
Students identify equal shares of circles, rectangles and squares.
Students partition circles, rectangles, and squares into 2 shares and identify the shares as halves or half of.
Students partition circles, rectangles, and squares into 4 shares and identify the shares as fourths, fourth of, or quarter of.
Students count the number of shares in an equal partitioned shape and describe the whole as two of, or four of the shares.
Students partition identical shapes into halves and fourths to understand that more equal shares create smaller shares.

Standards: Content

MATH.1.NBT.C	Use place value understanding and properties of operations to add and subtract
MATH.1.NBT.C.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
MATH.1.NBT.C.6	Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), 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 and explain the reasoning used.
MATH.1.M	Measurement
MATH.1.M.A	Measure lengths indirectly and by iterating length units
MATH.1.M.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
MATH.1.M.A.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
MATH.1.M.B	Tell and write time
MATH.1.M.B.3	Tell and write time in hours and half-hours using analog and digital clocks.
MATH.1.DL	Data Literacy
MATH.1.DL.A	Represent and interpret data
MATH.1.DL.A.1	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
MATH.1.G	Geometry
MATH.1.G.A	Reason with shapes and their attributes
MATH.1.G.A.3	Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

Standards: Interdisciplinary

PFL.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.
PFL.9.1.2.PB.2	Explain why an individual would choose to save money.
CS.K-2.8.1.2.AP.2	Model the way programs store and manipulate data by using numbers or other symbols to represent information.
CS.K-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.
CS.K-2.8.1.2.DA.4	Make predictions based on data using charts or graphs.
CS.K-2.8.1.2.NI.2	Describe how the Internet enables individuals to connect with others worldwide.
WRK.9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
TECH.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).
TECH.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).
TECH.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		