Unit 2 - Addition and Subtraction Strategies, Shapes and Solids

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

Unit Overview

Enduring Understandings

Understand how to relate counting to subtraction and use it to as a more efficient means to find a difference.
Understand how to use number lines, drawings, ten -frames, number bonds, and equations to illustrate subtraction.
Understand how to use a known fact to write related facts.
Understand how to determine is a subtraction equation is true or false.
Understand defining and non-defining attributes of 2- and 3- dimensional shapes.
Able to draw 2-dimensional shapes given defining and non-defining attributes.
Understand how to put together 2-dimensional shapes to create new shapes.
Understand how to represent an add to situation with equations when either the result or one or two addends are unknown.
Understand how to represent a put together situation with equations when either the result or one or two addends are unknown.
Understand how to represent addition words problems that have three addends with equations.

Essential Questions

What strategies can I use to subtract?
What are shapes and solids?
How can I solve addition problems?

Learning Objectives

Understand (explain) that subtraction is a more efficient way of determining a difference.
Count back on a number line to solve a subtraction equation.
Start with the change number (subtrahend) and count on to the total (minuend).
Use the make a 10 strategy to solve subtraction equations within 20.
Use near doubles and doubles to solve subtraction equations within 20.
Use addition to subtract.
Make fact families relating the three numbers to addition and subtraction.
Use different strategies to determine an unknown value in a subtraction equation.
Determine whether a subtraction equation is true or false.
Students describe defining attributes of 2-dimensional shapes.

Students describe defining attributes that do not define shapes. Students draw 2-dimensional shapes given defining and non-defining attributes.
Students put together 2-dimensional shapes to create a composite shape
Students create a new 2-dimensional composite shape from an existing composite shape.
Students describe attributes that define and do not define solids.
Students put together solids to create a composite solid shape. Students create a new solid composite shape from an existing solid composite shape.
Students represent an add to situation with an equation when the two addends are known.
Students represent an add to situation with an equation when the first or second addend is unknown.
Students represent a put together situation with an equation when the two addends are known.
Students represent a put together situation with an equation when both addends are unknown or when one addend is unknown.
Students represent an addition situation with an equation when there are three addends.
Students represent and solve various addition problems

Standards: Content

1.OA.B	Understand and apply properties of operations and the relationship between addition and subtraction
1.OA.B.4	Understand subtraction as an unknown-addend problem.
1.OA.C	Add and subtract within 20
1.OA.C.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
1.OA.C.6	Add and subtract within 20, demonstrating accuracy and efficiency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).
1.OA.D	Work with addition and subtraction equations
1.OA.D.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.
1.OA.D.8	Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.
1.G	Geometry
1.G.A	Reason with shapes and their attributes
1.G.A.2	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

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		