Mathematics Department

Grade 1

Developed By: Leann Martin and Grade 1 Teachers
Effective Date: Fall 2020

Scope and Sequence

Month	Grade 1
September	Grade 1 Math Baseline Assessment (by September 14)- HOLD OFF Chapter 1: Numbers to 10 ● *Counting to 10* ● *Comparing Numbers* ● *Number Patterns* Chapter 2: Addition and Subtraction within 10 ● *Making Number Bonds* ● *Ways to Add* ● *Making Addition Stories* ● *Real-world Problems: Addition* ● *Ways to Subtract* ● *Making Subtraction Stories* ● *Real-World Problems: Subtraction* ● *Making Fact Families*
October	Finish Chapter 2 Chapter 3: Shapes and Patterns ● *Exploring Flat Shapes* ● *Exploring Solid Shapes* ● *Using Shapes to Make Pictures and Models* ● *Seeing Shapes Around Us* ● *Using Flat Shapes to Make Patterns* ● *Using Solid Shapes to Make Patterns*

November	Chapter 4: Numbers to 20 ● *Counting to 20* ● *Place Value* ● *Comparing and Ordering Numbers* ● *Number Patterns*
December	Chapter 5: Addition & Subtraction within 20 ● *Ways to Add Fluently* ● *Ways to Subtract Fluently* ● *Real-World Problems: Addition and Subtraction*
January	Chapter 6: Numbers to 40 ● *Counting to 20* ● *Place Value* ● *Comparing, Ordering, and Number Patterns* Chapter 7: Calendar and Time ● *Using a Calendar* ● *Telling Time to the Hour* ● *Telling Time to the Half Hour*
February	Book B Chapter 8: Addition & Subtraction within 40 ● *Addition without Regrouping* ● *Addition with Regrouping* ● *Subtraction without Regrouping* ● *Subtraction with Regrouping* ● *Real-World Problems: Addition and Subtraction*
March	Finish Chapter 8 Chapter 9: Length and Weight ● *Comparing Lengths* ● *Comparing More Lengths* ● *Using a Start Line*

	• *Measuring Length* • *Measuring Length in Units* • *Comparing WEights* • *Measuring Weight* • *Measuring Weight in Units*
April	Chapter 10: Numbers to 120 • *Counting to 120* • *Place Value* • *Comparing, Ordering and Number Patterns* Chapter 11: Addition & Subtraction within 100 • *Addition without Regrouping* • *Addition with Regrouping* • *Subtraction without Regrouping* • *Subtraction with Regrouping*
May	Finish Chapter 11 ***Note: The NJSLS does not require grade 1 students to master the paper-pencil algorithm for regrouping in addition and subtraction, however students are required to understand the concept of regrouping ten ones for one ten and vice versa. (Students should be able to add a two-digit number and a one-digit number that may or may not involve regrouping OR a two-digit number and a multiple of 10) (1.NBT.4)*** Chapter 12: Graphs • *Simple Picture Graphs* • *Tally Charts and Picture Graphs*
June	Chapter 13: Money • *Penny, Nickel, and Dime* • *Quarter* • *Counting Money* • *Adding and Subtracting Money*

Unit 1

Numbers to 20

Summary and Rationale

In this unit, children use countable objects to develop the association between the physical representation of the number, the number symbol, and the number word. Besides counting objects in a set, and creating a set within a given number of objects, children also differentiate between numbers of objects in sets, a skill that forms a basis for number comparison. They learn to recognize relationships between numbers, such as 1 *more than* and 1 *less than*. Using countable objects and a math balance, children are led to see how a given number can be made from two smaller numbers. The part-whole analysis through number bonds forms the basis for the basis of the concept of adding two numbers to give another number.

Children add by counting on and by using number bonds. They learn to construct addition stories from pictures and solve real-world problems by writing addition sentences. Children use strategies such as the take-away concept, number bonds, counting on, and counting back to identify and learn subtraction facts. They write subtraction sentences to represent familiar situations, and begin to see the inverse relationship between addition and subtraction by using number bonds.

As an introduction to the concept of place value, children count to 20 using pictorial representations of concrete objects. They recognize numbers 11 to 20 as one group of ten and a particular number of ones. This is a key stage and sets the foundation for developing the idea of tens and ones and being able to make sense of two-digit numbers. Children compare numbers and establish number relationships such as *greater than* and *less than*. They identify patterns from these number relationships and extend the patterns.

Children learn more strategies for addition and subtraction as they solve problems that include numbers between 10 and 20. These strategies include grouping into tens and ones, number bonds, and using double facts to add and subtract. Children use addition and subtraction sentences to solve real-world problems.

Recommended Pacing

Chapter 1: Numbers to 10: 2 weeks
Chapter 2: Number Bonds: 1-2 weeks
Chapter 3: Addition Facts to 10: 2-3 weeks
Chapter 4: Subtraction Facts to 10: 3 weeks
Chapter 7: Numbers to 20: 2 weeks
Chapter 8: Addition and Subtraction Facts to 20: 2 weeks

Standards

Number and Operations in Base Ten

1.NBT.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones.
1.NBT.2a	Understand that 10 can be thought of as a bundle of ten ones — called a "ten."
1.NBT.2b	Understand that the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
1.NBT.3	Understand that the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
1.NBT.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
Operations & Algebraic Thinking	
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.[1]
1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
1.OA.3	Apply properties of operations as strategies to add and subtract.[2] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*
1.OA.4	Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within 20.*
1.OA.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
1.OA.6	Add and subtract within 20, demonstrating fluency 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.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.

1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.*
Mathematical Practices	
K-12.MP.1	Make sense of problems and persevere in solving them.
K-12.MP.2	Reason abstractly and quantitatively.
K-12.MP.3	Construct viable arguments and critique the reasoning of others.
K-12.MP.4	Model with mathematics.
K-12.MP.5	Use appropriate tools strategically.
K-12.MP.6	Attend to precision.
K-12.MP.7	Look for and make use of structure.
K-12.MP.8	Look for and express regularity in repeated reasoning.
Interdisciplinary Connections	
ELA	
Math journal, math vocabulary discussions, reading topic-related books, providing explanations	
SL.1.1.	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. C. Ask questions to clear up any confusion about the topics and texts under discussion.
SL.1.3.	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
SL.1.6.	Produce complete sentences when appropriate to task and situation.
Integration of Technology	
Use of SmartBoard, playing online games	
8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Instructional Focus

Enduring Understandings:	**Essential Questions:**
Numbers to 20 can be counted and compared.	What are some strategies for addition?

Numbers to 20 can be counted, ordered, and compared. Number bonds can be used to show parts and whole. Addition can be used to find how many in all. Subtraction can be used to find how many are left. Subtraction is the opposite of addition. Different strategies can be used to add and subtract.	What are some strategies for subtraction? Why and when do we add? Why and when do we subtract? How are addition and subtraction related?

Evidence of Learning (Assessments)

Math In Focus Chapter 1 Test Prep: Numbers to 10
Math In Focus Chapter 2 Test Prep: Number Bonds
Math In Focus Chapter 3 Test Prep: Addition Facts to 10
Math In Focus Chapter 4 Test Prep: Subtraction Facts to 10
Math In Focus Chapter 7 Test Prep: Numbers to 20
Math In Focus Chapter 8 Test Prep: Addition and Subtraction Facts to 20

Benchmark Assessment #1 (Chapters 1 through 4)
Benchmark Assessment #2 (Chapters 5 through 7)
Benchmark Assessment #3 (Chapters 8, 9, 11)
Math Spring Summative Assessment
Math Centers
Homework
Classwork
Class Participation

Objectives (SLO)

Students will know:	Students will be able to:
● Numbers to 20 ● Comparative words: same, more, fewer, greater than, less than, more than ● Pattern ● Number bonds, part, whole ● Add, plus (+), equal to (=) ● Addition sentence, addition story ● Subtract, take away, minus (-) ● Subtraction sentence, subtraction story ● Fact family ● Counting to 20 ● Place Value ● Comparing Numbers	● Count from 0 to 10 objects. ● Read and write 0 to 10 in numbers and words. ● Compare two sets of objects by using one-to-one correspondence. ● Identify the set that has more, fewer, or the same number of objects. ● Identify the number that is greater than or less than another number. ● Make number patterns. ● Use connecting cubes or a math balance to find number bonds. ● Find different number bonds for numbers to 10. ● Count on to add and to subtract.

• Making Patterns • Ordering Numbers • Addition and Subtraction Strategies • Addition and Subtraction Facts .	• Take away to subtract. • Count back to subtract. • Use number bonds to add in any order and to subtract. • Write and solve addition and subtraction sentences. • Tell addition and subtraction stories about pictures. • Recognize related addition and subtraction sentences. • Write fact families and use them to solve real-world problems. • Count on from 10 to 20. • Read and write 11 to 20 in numbers and words. • Use a place value chart to show numbers up to 20. • Show objects up to 20 as tens and ones. • Compare numbers to 20. • Order numbers by making number patterns. • Use different strategies to add one and two-digit numbers. • Subtract a one-digit from a two-digit number with and without regrouping. • Solve real world problems.

Suggested Resources/Technology Tools

Math In Focus Resources Chapter 1: Numbers to 10
Math In Focus Resources Chapter 2: Number Bonds
Math In Focus Resources Chapter 3: Addition Facts to 10
Math In Focus Resources Chapter 4: Subtraction Facts to 10
Focus Lesson 4.4a True and False Number Sentences TE 252A (1.OA.7)
Math In Focus Resources Chapter 7: Numbers to 20
Math In Focus Resources Chapter 8: Addition and Subtraction Facts to 20

<u>Resources and Manipulatives</u>
Teacher Activity Cards
White Boards
Counters
Counting Tape
Math Balance
Connecting Cubes
Number Cubes
Unit Cubes
Ten Frames
Number Bonds
Tens Rods
Place-Value Chart
Addition and Subtraction Boards

<u>Online Resources</u>
Math In Focus Student Interactivities

Math In Focus Virtual Manipulatives:
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/numberbonds.html Virtual Number Bonds and Math Balance
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/basetenblocks.html Virtual Base Ten Blocks for Showing, Comparing, Adding, and Subtracting
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/counters.html Virtual Counters and Cubes for Comparing Sets, Adding, and Subtracting
https://www.ixl.com/math/grade-1 Grade 1 Concepts by Topic
http://www.abcya.com/guess_the_number.htm Guess the Number: Less Than/Greater Than
http://www.abcya.com/subtraction_game.htm Balloon Pop Subtraction
http://www.abcya.com/kindergarten_word_problems_add_subtract.htm Add and Subtract to 10
http://www.abcya.com/sum_of_all_dice.htm Add the Sum of the Dice
http://www.abcya.com/addition.htm Marble Addition
https://www.mathplayground.com/math_monster_addition.html Addition to 10
https://www.mathplayground.com/puzzle_pics_subtraction_facts_to_20.html Subtraction to 10
https://www.mathplayground.com/math_monster_subtraction.html Subtraction past 10
http://www.abcya.com/math_facts_game.htm Math Facts
http://www.abcya.com/base_ten_bingo.htm Place-Value Bingo
https://www.mathplayground.com/place_value_party.html Place-Value
https://www.mathplayground.com/wpdatabase/wpindex.html Word Problems of Varying Difficulties
https://jr.brainpop.com/math/additionandsubtraction/basicadding/ Basic Addition Video
https://jr.brainpop.com/math/additionandsubtraction/basicsubtraction/ Basic Subtraction Video
https://jr.brainpop.com/math/additionandsubtraction/doubles/ Doubles Facts Video
https://jr.brainpop.com/math/additionandsubtraction/makingten/ Making Ten Video
https://www.mathplayground.com/video_skip_counting.html Skip Counting and Hundred Chart Video

Modifications

*These are only suggested ideas to modify instruction, modifications and accommodations should be tailored to each student's IEP and needs. Also, see textbook for Differentiated Instruction ideas in each chapter.

Special Education - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention
ELL - Using simplified language, modeling, visual aids, manipulatives, vocabulary with images and examples
Gifted and Talented - Enrichment book, Put on Your Thinking Cap pages and resources, higher-level questions, challenge packets, KenKen and other puzzles, leading group work
504 - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention

21ST CENTURY LIFE AND CAREER STANDARDS

Please select all standards that apply to this unit of study:

- ❑ Act as a responsible and contributing citizen and employee.
- ❑ Apply appropriate academic and technical skills.
- ❑ Attend to personal health and financial well being.

- ❑ Communicate clearly and effectively and with reason.
- ❑ Consider the environmental social and economics impacts of decisions.
- ❑ Demonstrate creativity and innovation.
- ❑ Employ valid and reliable research strategies.
- ❑ Utilize critical thinking to make sense of problems and persevere in solving them.
- ❑ Model integrity, ethical leadership, and effective management.
- ❑ Plan education and career paths aligned to personal goals.
- ❑ Use technology to enhance productivity.
- ❑ Work productively in teams while using cultural global competence.

Suggestions on integrating these standards can be found at: http://www.state.nj.us/education/cccs/2014/career/9.pdf

LINKS TO CAREERS:

Unit 2

Numbers to 120: Place Value

Summary and Rationale

Counting on to 40 is a smooth progression from where children stopped, at 20, in previous units. The general form in the numbers in words from 20 to 40 gives children a sense of how the numbers beyond 40 may be written.

Children use place-value charts to show numbers to 40. The place-value chart enables children to make comparisons between two or more numbers, when tens are different or when tens are equal. In being able to compare two numbers, children apply this knowledge to ordering numbers in ascending and descending order. With children familiar with the counting, comparing, and ordering of numbers to 40, they are then able to identify number patterns that occur through addition and subtraction. All of these activities build the foundation that children will rely on when they learn about numbers to 100.

In this unit, children learn to count on from 40 to 100. In knowing that a two-digit number is made up of tens and ones, children count in tens before counting the remaining ones when identifying a two-digit number. Children learn to represent numbers to 100 using place-value charts and strategies to compare and order them. Once children can order numbers, they observe number patterns and identify missing numbers patterns with numbers to 100.

Recommended Pacing

Chapter 12: Numbers to 40 and Chapter 16: Numbers to 120: 2-3 weeks

Standards

Number and Operations in Base Ten	
1.NBT.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones.
1.NBT.2a	Understand that 10 can be thought of as a bundle of ten ones — called a “ten.”
1.NBT.2c	Understand that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
Operations & Algebraic Thinking	
1.OA.4	Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within 20.*

1.OA.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
1.OA.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.*
Mathematical Practices	
K-12.MP.1	Make sense of problems and persevere in solving them.
K-12.MP.2	Reason abstractly and quantitatively.
K-12.MP.3	Construct viable arguments and critique the reasoning of others.
K-12.MP.4	Model with mathematics.
K-12.MP.5	Use appropriate tools strategically.
K-12.MP.6	Attend to precision.
K-12.MP.7	Look for and make use of structure.
K-12.MP.8	Look for and express regularity in repeated reasoning.
Interdisciplinary Connections	
ELA	
Math journal, math vocabulary discussions, reading topic-related books, providing explanations	
SL.1.1.	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. C. Ask questions to clear up any confusion about the topics and texts under discussion.
SL.1.3.	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
SL.1.6.	Produce complete sentences when appropriate to task and situation.
Integration of Technology	
Use of SmartBoard, playing online games	
8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Instructional Focus

Enduring Understandings:	**Essential Questions:**
Place-value charts can be used to show numbers to 120. Numbers to 120 can be counted and compared. Numbers to 120 can be counted, ordered, and compared. Missing numbers in a number pattern can sometimes be identified by adding or subtracting.	How does finding patterns help in counting? How are some patterns created?

Evidence of Learning (Assessments)

Math In Focus Chapter 12 Test Prep: Numbers to 40
Math In Focus Chapter 16 Test Prep: Numbers to 120

Math Spring Summative Assessment
Math Centers
Homework
Classwork
Class Participation

Objectives (SLO)

Students will know:	Students will be able to:
● Numbers to 120 ● Comparative words: same, more, fewer, greater than, less than, more than ● Pattern ● Fact family ● Counting to 120 ● Place Value ● Comparing Numbers ● Making Patterns ● Ordering Numbers ● Use of Place-Value Chart ● Use of counting tape	● Count on from 21 to 40. ● Read and write 21 to 40 in numbers and words. ● Use a place-value chart to show numbers up to 40. ● Show objects up to 40 as tens and ones. ● Use a strategy to compare numbers to 40. ● Order numbers to 40. ● Count on from 41 to 120. ● Read and write 41 to 120 in numbers and in words. ● Use a place-value chart to show numbers up to 120. ● Show objects up to 120 as tens and ones. ● Use a strategy to compare numbers to 120 ● Order numbers to 120. ● Find the missing numbers in a number pattern.

Suggested Resources/Technology Tools

Math In Focus Resources Chapter 12: Numbers to 40
Math In Focus Resources Chapter 16: Numbers to 120
Focus Lesson: 16.1a (after Lesson 1) Counting to 120 (1.NBT.1) TE 296C

Focus Lesson: 16.3a (after Lesson 3) Comparing & Ordering (1.NBT.3) TE 296D

Resources and Manipulatives
Connecting Cubes
Place-Value Chart
Counting Tape
Number Lines
Hundred Chart
Number Cubes
Unit Cubes
Base Ten Blocks
Ten Rods
Counters

Online Resources
Math In Focus Student Interactivities
Math In Focus Virtual Manipulatives:
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/numberbonds.html Virtual Number Bonds and Math Balance
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/basetenblocks.html Virtual Base Ten Blocks for Showing, Comparing, Adding, and Subtracting
https://www.ixl.com/math/grade-1 Grade 1 Concepts by Topic
http://www.abcya.com/guess_the_number.htm Guess the Number: Less Than/Greater Than
http://www.abcya.com/comparing_number_values.htm Comparing Numbers
http://www.abcya.com/base_ten_fun.htm Base Ten Fun
http://www.abcya.com/base_ten.htm Base Ten Blocks
http://www.abcya.com/base_ten_bingo.htm Base Ten Bingo
http://www.abcya.com/interactive_100_number_chart.htm Interactive Hundred Chart
https://www.mathplayground.com/place_value_party.html Place-Value
https://jr.brainpop.com/math/numbersense/placevalue/ Place Value Video
https://jr.brainpop.com/math/numbersense/onehundred/ One Hundred Video
https://jr.brainpop.com/math/numbersense/comparingnumbers/ Comparing Numbers Video
https://www.mathplayground.com/video_skip_counting.html Skip Counting and Hundred Chart Video

Modifications

*These are only suggested ideas to modify instruction, modifications and accommodations should be tailored to each student's IEP and needs. Also, see textbook for Differentiated Instruction ideas in each chapter.

Special Education - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention
ELL - Using simplified language, modeling, visual aids, manipulatives, vocabulary with images and examples
Gifted and Talented - Enrichment book, Put on Your Thinking Cap pages and resources, higher-level questions, challenge packets, KenKen and other puzzles, leading group work

504 - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention

21ST CENTURY LIFE AND CAREER STANDARDS

Please select all standards that apply to this unit of study:

- ❑ Act as a responsible and contributing citizen and employee.
- ❑ Apply appropriate academic and technical skills.
- ❑ Attend to personal health and financial well being.
- ❑ Communicate clearly and effectively and with reason.
- ❑ Consider the environmental social and economics impacts of decisions.
- ❑ Demonstrate creativity and innovation.
- ❑ Employ valid and reliable research strategies.
- ❑ Utilize critical thinking to make sense of problems and persevere in solving them.
- ❑ Model integrity, ethical leadership, and effective management.
- ❑ Plan education and career paths aligned to personal goals.
- ❑ Use technology to enhance productivity.
- ❑ Work productively in teams while using cultural global competence.

Suggestions on integrating these standards can be found at: http://www.state.nj.us/education/cccs/2014/career/9.pdf

LINKS TO CAREERS:

Unit 3

Addition and Subtraction

(with and without Regrouping)

Summary and Rationale

In this unit, children progress to the standard vertical form of addition and subtraction of numbers based on place value. In teaching children to regroup, they are encouraged to use place-value charts to correctly align the digits and to record the regrouping process. The frequent use of place-value charts leads children away from a dependence on concrete representations which are not feasible when later dealing with larger numbers. Children are also reminded that addition can be used to check subtraction. Children also solve real-world problems involving addition and subtraction.

Children use number bonds to add and subtract mentally. They add and subtract mentally by also using double facts, and using the strategies of *add the ones*, *add the tens, subtract the ones,* and *subtract the tens.*

Children extend the vertical form of addition and subtraction to numbers to 100 through two methods: *counting on/back* and *using place-value charts*. Through these methods, children add and subtract with and without regrouping using numbers to 100.

Recommended Pacing

*C*hapter 13: Addition and Subtraction and Chapter 17: Addition and Subtraction to 100: 3-4 weeks
Chapter 14: Mental Math Strategies: 1-2 weeks

Standards

Number and Operations in Base Ten	
1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones.
1.NBT.2a	Understand that 10 can be thought of as a bundle of ten ones — called a “ten.”
1.NBT.2c	Understand that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
1.NBT.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
1.NBT.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

1.NBT.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.
Operations & Algebraic Thinking	
1.OA.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.[1]
1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
1.OA.3	Apply properties of operations as strategies to add and subtract.[2] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*
1.OA.4	Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within 20.*
1.OA.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
1.OA.6	Add and subtract within 20, demonstrating fluency 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.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.*
Mathematical Practices	
K-12.MP.1	Make sense of problems and persevere in solving them.
K-12.MP.2	Reason abstractly and quantitatively.
K-12.MP.3	Construct viable arguments and critique the reasoning of others.
K-12.MP.4	Model with mathematics.
K-12.MP.5	Use appropriate tools strategically.
K-12.MP.6	Attend to precision.

K-12.MP.7	Look for and make use of structure.
K-12.MP.8	Look for and express regularity in repeated reasoning.
Interdisciplinary Connections	
ELA	
Math journal, math vocabulary discussions, reading topic-related books, providing explanations	
SL.1.1.	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. C. Ask questions to clear up any confusion about the topics and texts under discussion.
SL.1.3.	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
SL.1.6.	Produce complete sentences when appropriate to task and situation.
Integration of Technology	
Use of SmartBoard, playing online games	
8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Instructional Focus

Enduring Understandings:	**Essential Questions:**
Numbers to 100 can be added and subtracted with or without regrouping. Number bonds can help you add and subtract mentally. Regrouping is needed when the addition of ones exceeds nine, and when the subtraction of ones cannot be carried out because of insufficient ones.	What are some strategies for adding mentally? What are some strategies for subtracting mentally? What are some strategies for addition and subtraction within 100? When is regrouping necessary in addition? When is regrouping necessary in subtraction?

Evidence of Learning (Assessments)

Math In Focus Chapter 13 Test Prep: Addition and Subtraction to 40**This assessment contains above grade level questions that can be used to identify Level 4 student performance.*

Math In Focus Chapter 14 Test Prep: Mental Math Strategies

Math In Focus Chapter 17 Test Prep: Addition and Subtraction to 40**This assessment contains above grade level questions that can be used to identify Level 4 student performance.*

Note: The NJSLS does not require grade 1 students to master the paper-pencil algorithm for regrouping in addition and subtraction, however students are required to understand the concept of regrouping ten ones for one ten and vice versa.***

Math Spring Summative Assessment
Math Centers
Homework
Classwork
Class Participation

Objectives (SLO)

Students will know:	Students will be able to:
● Regroup ● Mental math ● Doubles fact	● Add a two-digit number and a one-digit number without and with regrouping. ● Add two-digit numbers without and with regrouping. ● Subtract a one-digit number from a two-digit number without and with regrouping. ● Subtract a two-digit number from a two-digit number without and with regrouping. ● Add three one-digit numbers. ● Use addition and subtraction facts to solve real-world problems. ● Mentally add and subtract one-digit numbers. ● Mentally add a one-digit number to a two-digit number. ● Mentally add a two-digit number to tens. ● Mentally subtract a one-digit number from a two-digit number. ● Mentally subtract tens from a two-digit number.

Suggested Resources/Technology Tools

Math In Focus Resources Chapter 13: Addition and Subtraction
Math In Focus Resources Chapter 14: Mental Math Strategies
Math In Focus Resources Chapter 17: Addition and Subtraction to 100.

<u>Resources and Manipulatives</u>
Number Lines
White Boards
Connecting Cubes
Hundred Chart
Number Cubes
Number Bonds

Place-Value Chart
Unit Cubes
Base Ten Blocks
Ten Rods
Counters
Counting Tape
Math Balance and Weights
Addition and Subtraction Boards

Online Resources
Math In Focus Student Interactivities
Math In Focus Virtual Manipulatives
https://www.ixl.com/math/grade-1 Grade 1 Concepts by Topic
http://www.abcya.com/math_facts_game.htm Math Facts
https://www.mathplayground.com/ASB_Canoe_Puppies.html Addition With and Without Regrouping
https://www.mathplayground.com/brain_workouts/brain_workout_01_addition.html Addition With and Without Regrouping
https://www.mathplayground.com/puzzle_pics_addition.html Addition to 100 with Missing Parts
https://www.mathplayground.com/puzzle_pics_subtraction.html Subtraction to 100 with Missing Parts
https://www.mathplayground.com/wpdatabase/wpindex.html Word Problems of Varying Difficulties
https://jr.brainpop.com/math/additionandsubtraction/addingwithregrouping/ Addition with Regrouping Video
https://jr.brainpop.com/math/additionandsubtraction/subtractingwithregrouping/ Subtraction with Regrouping Video
https://jr.brainpop.com/math/additionandsubtraction/addingandsubtractingtens/ Adding and Subtracting Tens Video
https://www.mathplayground.com/video_skip_counting.html Skip Counting and Hundred Chart Video

Modifications

*These are only suggested ideas to modify instruction, modifications and accommodations should be tailored to each student's IEP and needs. Also, see textbook for Differentiated Instruction ideas in each chapter.

Special Education - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention
ELL - Using simplified language, modeling, visual aids, manipulatives, vocabulary with images and examples
Gifted and Talented - Enrichment book, Put on Your Thinking Cap pages and resources, higher-level questions, challenge packets, KenKen and other puzzles, leading group work
504 - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention

21ST CENTURY LIFE AND CAREER STANDARDS

Please select all standards that apply to this unit of study:

- ❑ Act as a responsible and contributing citizen and employee.
- ❑ Apply appropriate academic and technical skills.
- ❑ Attend to personal health and financial well being.
- ❑ Communicate clearly and effectively and with reason.

- ❑ Consider the environmental social and economics impacts of decisions.
- ❑ Demonstrate creativity and innovation.
- ❑ Employ valid and reliable research strategies.
- ❑ Utilize critical thinking to make sense of problems and persevere in solving them.
- ❑ Model integrity, ethical leadership, and effective management.
- ❑ Plan education and career paths aligned to personal goals.
- ❑ Use technology to enhance productivity.
- ❑ Work productively in teams while using cultural global competence.

Suggestions on integrating these standards can be found at: http://www.state.nj.us/education/cccs/2014/career/9.pdf

LINKS TO CAREERS:

Unit 4

Measurement & Data

Summary and Rationale

As an introduction to measuring length, children compare the lengths of two objects both directly (by comparing them with each other) and indirectly (by comparing both with a third object), and they order several objects according to length. Children use common objects as non-standard units to measure and compare length. Their spatial awareness is exercised by having tem recognize vertical length as height.

Children's counting skills are utilized in the collection of data. They are led to see how the data collected can be compiled into picture graphs or bar graphs. The strategy of using tally marks is a way to organize data better. Children interpret and make sense of the data from the diagrams.

Children learn to read and show time to the hour and to the half hour on a clock. With the ability to read the clock, children are able to relate the notion of time to their everyday lives.

Recommended Pacing

Chapter 9: Length: 2 weeks
Chapter 11: Picture Graphs and Bar Graphs: 2 weeks
Chapter 15: Time: 1-2 weeks

Standards

Measurement & Data	
1.MD.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
1.MD.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.*
1.MD.3	Tell and write time in hours and half-hours using analog and digital clocks.
1.MD.4	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 another.
Operations & Algebraic Thinking	
1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.*

Mathematical Practices	
K-12.MP.1	Make sense of problems and persevere in solving them.
K-12.MP.2	Reason abstractly and quantitatively.
K-12.MP.3	Construct viable arguments and critique the reasoning of others.
K-12.MP.5	Use appropriate tools strategically.
K-12.MP.6	Attend to precision.
K-12.MP.7	Look for and make use of structure.
Interdisciplinary Connections	
ELA	
Math journal, math vocabulary discussions, reading topic-related books, providing explanations	
SL.1.1.	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. C. Ask questions to clear up any confusion about the topics and texts under discussion.
SL.1.3.	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
SL.1.6.	Produce complete sentences when appropriate to task and situation.
Integration of Technology	
Use of SmartBoard, playing online games	
8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Instructional Focus

Enduring Understandings:	**Essential Questions:**
Using different nonstandard units may give different measurements for the same item. Most measurements have some degree of uncertainty. Picture graphs, tally charts, and bar graphs can be used to display data. Clocks are used to read time of the day.	Why do we measure? Why do we need standardized units of measurement? How does what we measure influence how we measure? What are the characteristics of morning, afternoon, and evening?

	Why do we need to know what time it is? How do we tell time to the hour?
Evidence of Learning (Assessments)	
Math In Focus Chapter 9 Test Prep: Length *Math In Focus* Chapter 11 Test Prep: Picture and Bar Graphs *Math In Focus* Chapter 15 Test Prep: Calendar and Time Benchmark Assessment #3 (Chapters 8, 9, 11) Math Spring Summative Assessment Math Centers Homework Classwork Class Participation	
Objectives (SLO)	
Students will know: ● start line ● about ● Unit ● terms: *o'clock, minute hand, hour hand, half past, half hour*	Students will be able to: ● Compare two lengths using the terms tall/taller, long/longer, and short/shorter. ● Compare two lengths by comparing each with a third length. ● Compare more than two lengths using the terms tallest, longest, and shortest. ● Use a common starting point when comparing lengths. ● Use the term "unit" when measuring length. ● Measure lengths using nonstandard units. ● Explain why there is a difference in a measurement when using different nonstandard units. ● Count measurement units in a group of ten and ones. ● Collect and organize data. ● Show data as a picture graph. ● Draw picture graphs ● Make a tally chart. ● Show data in a bar graph. ● Interpret data shown in a picture graph and a bar graph. ● Use the term o'clock to tell the time to the hour. ● Read and show time to the hour on a clock. ● Read time to the half hour. ● Use the term *half past* ● Relate time to daily activities.
Suggested Resources/Technology Tools	

Math In Focus Resources Chapter 9: Length
Math In Focus Resources Chapter 11: Picture Graphs and Bar Graphs
Math In Focus Resources Chapter 15: Calendar and Time
Focus Lesson: 15.2a (after Lesson 2) Telling Time to Hours (1.MD.3) TE 296A
Focus Lesson: 15.3a (after Lesson 3) Telling Time to the Half-Hour (1.MD.3) TE 296B

Resources and Manipulatives
Teacher Activity Cards
Connecting Cubes
Number Cubes
Demonstration Clock
Laminated Clock Worksheets
Paper Clips
Other Non-Standard Objects
Rulers
Picture and Bar Graph Worksheets

Online Resources
Math In Focus Student Interactivities
Math In Focus Virtual Manipulatives:
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/graphing.html Virtual Graphs
https://www.ixl.com/math/grade-1 Grade 1 Concepts by Topic
http://www.abcya.com/telling_time.htm Telling Time
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/measurement.html Virtual Clock
https://www.mathplayground.com/video_picture_graphs.html Picture Graphs Video
https://www.mathplayground.com/video_bar_graphs.html Bar Graphs Video
https://jr.brainpop.com/math/time/partsofaclock/ Parts of a Clock Video
https://jr.brainpop.com/math/time/timetothehour/ Time to the Hour Video
https://jr.brainpop.com/math/measurement/inchesandfeet/ Inches and Feet Video
https://jr.brainpop.com/math/data/tallychartsandbargraphs/ Tally Charts and Bar Graphs Video
https://jr.brainpop.com/math/data/pictographs/ Pictographs Video

Modifications

*These are only suggested ideas to modify instruction, modifications and accommodations should be tailored to each student's IEP and needs. Also, see textbook for Differentiated Instruction ideas in each chapter.

Special Education - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention
ELL - Using simplified language, modeling, visual aids, manipulatives, vocabulary with images and examples
Gifted and Talented - Enrichment book, Put on Your Thinking Cap pages and resources, higher-level questions, challenge packets, KenKen and other puzzles, leading group work

504 - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention

21ST CENTURY LIFE AND CAREER STANDARDS

Please select all standards that apply to this unit of study:

- ❑ Act as a responsible and contributing citizen and employee.
- ❑ Apply appropriate academic and technical skills.
- ❑ Attend to personal health and financial well being.
- ❑ Communicate clearly and effectively and with reason.
- ❑ Consider the environmental social and economics impacts of decisions.
- ❑ Demonstrate creativity and innovation.
- ❑ Employ valid and reliable research strategies.
- ❑ Utilize critical thinking to make sense of problems and persevere in solving them.
- ❑ Model integrity, ethical leadership, and effective management.
- ❑ Plan education and career paths aligned to personal goals.
- ❑ Use technology to enhance productivity.
- ❑ Work productively in teams while using cultural global competence.

Suggestions on integrating these standards can be found at: http://www.state.nj.us/education/cccs/2014/career/9.pdf

LINKS TO CAREERS:

Unit 5

Geometry

Summary and Rationale

Children have learned in kindergarten to identify, name, and describe a variety of plane and solid shapes. In this unit, children classify and compare plane and solid shapes based on the geometric properties, using the appropriate vocabulary for describing shapes. They make composite shapes, models, and patterns with these shapes. Mathematical concepts in geometry can be related to objects in the real word, so children are encouraged to use basic shapes and spatial reasoning to model objects in their environment.

Recommended Pacing

Chapter 5: Shapes: 2 weeks

Standards

Geometry	
1.G.1	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.
1.G.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.[1]
1.G.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.
Operations & Algebraic Thinking	
1.OA.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.*
Mathematical Practices	
K-12.MP.1	Make sense of problems and persevere in solving them.
K-12.MP.2	Reason abstractly and quantitatively.
K-12.MP.3	Construct viable arguments and critique the reasoning of others.
K-12.MP.4	Model with mathematics.

K-12.MP.5	Use appropriate tools strategically.
K-12.MP.6	Attend to precision.
K-12.MP.7	Look for and make use of structure.
K-12.MP.8	Look for and express regularity in repeated reasoning.
Interdisciplinary Connections	
ELA	
Math journal, math vocabulary discussions, reading topic-related books, providing explanations	
SL.1.1.	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. C. Ask questions to clear up any confusion about the topics and texts under discussion.
SL.1.3.	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
SL.1.6.	Produce complete sentences when appropriate to task and situation.
Integration of Technology	
Use of SmartBoard, playing online games	
8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Instructional Focus

Enduring Understandings:	**Essential Questions:**
Plane and solid shapes are found in the real-world and can be compared by their geometric attributes and properties. Patterns can be identified and compared by looking at the plane and solid shapes that are involved.	What is a pattern? Where are flat shapes found in the real-world? Where are solid shapes found in the real-world? Where are patterns found in the real-world?

Evidence of Learning (Assessments)

Math In Focus Chapter 5 Test Prep: Shapes
Focus Lesson: 5.1a (after Lesson 5.1) Exploring Plane Shapes (1.G.3) TE 252B

Benchmark Assessment #2 (Chapters 5, 6, 7)
Math Spring Summative Assessment
Math Centers
Homework
Classwork
Class Participation

Objectives (SLO)

Students will know:

- Flat and solid shape names
- Parts: side, corner
- Descriptive words: size, shape, color
- Comparative words: alike, different
- Sort
- Stack, slide, roll
- Repeating pattern
- Terminology: *same, groups, each, share, equally*

Students will be able to:

- Identify, classify, and describe plane and solid shapes.
- Make same and different shapes.
- Combine and separate plane and solid shapes.
- Identify plane and solid shapes in real life.
- Use plane and solid shapes to identify, extend and create patterns.
- Use objects or pictures to find the total number of items in groups of the same size.

Suggested Resources/Technology Tools

Math In Focus Resources Chapter 5: Shapes

Resources and Manipulatives
Teacher Activity Cards
Attribute Blocks (2D shapes)
Geometric Solids (3D shapes)

Online Resources
Math In Focus Student Interactivities
Math In Focus Virtual Manipulatives:
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/geometricfigures.html Virtual Solids, Plane Figures, Composite Shapes with Solids
https://www.ixl.com/math/grade-1 Grade 1 Concepts by Topic
https://www.mathplayground.com/tangrams.html Tangrams
http://www.abcya.com/fuzz_bugs_patterns.htm Patterns
https://www.mathplayground.com/patternblocks.html Composite Shapes
https://jr.brainpop.com/math/geometry/planeshapes/ Plane Shapes Video
https://jr.brainpop.com/math/geometry/solidshapes/ Solid Shapes Video
https://jr.brainpop.com/math/geometry/patterns/ Patterns Video

Modifications

*These are only suggested ideas to modify instruction, modifications and accommodations should be tailored to each student's IEP and needs. Also, see textbook for Differentiated Instruction ideas in each chapter.

Special Education - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention

ELL - Using simplified language, modeling, visual aids, manipulatives, vocabulary with images and examples

Gifted and Talented - Enrichment book, Put on Your Thinking Cap pages and resources, higher-level questions, challenge packets, KenKen and other puzzles, leading group work

504 - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention

21ST CENTURY LIFE AND CAREER STANDARDS

Please select all standards that apply to this unit of study:

- ❑ Act as a responsible and contributing citizen and employee.
- ❑ Apply appropriate academic and technical skills.
- ❑ Attend to personal health and financial well being.
- ❑ Communicate clearly and effectively and with reason.
- ❑ Consider the environmental social and economics impacts of decisions.
- ❑ Demonstrate creativity and innovation.
- ❑ Employ valid and reliable research strategies.
- ❑ Utilize critical thinking to make sense of problems and persevere in solving them.
- ❑ Model integrity, ethical leadership, and effective management.
- ❑ Plan education and career paths aligned to personal goals.
- ❑ Use technology to enhance productivity.
- ❑ Work productively in teams while using cultural global competence.

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LINKS TO CAREERS:

Unit 6

Selected Topics in Everyday Math

Summary and Rationale

Calendar

A mathematical concept that is associated with time is the ability to arrange events in order using a calendar. In this unit, children learn to read a calendar in terms of the days of the week and the months of a year and to write the date. With the ability to read both the calendar, children are able to relate the notion of day, month, and year to their everyday lives.

Ordinal Numbers

Ordering numbers and number positions with ordinal numbers are key number concepts. Children use ordinal numbers from first to tenth to describe order and position of objects and persons. They enhance their vocabulary with position words including *in front of, before*, and *after* to describe position of something relative to another.

Weight

Children integrate their understanding of numbers and measurement through an introduction to weight. They compare weight and learn to measure weight using a balance and use common objects as non-standard units to measure and compare weight.

Money

Children recall their knowledge of the penny, nickel, dime, and quarter. Children count the value of different coins by applying the strategies of counting on and skip-counting from the coin of greatest value by first arranging the coins in order. Children use addition and subtraction in real-world situations that involve money. They first interpret the question, form addition and subtraction sentences accordingly, and then apply the strategies of mental calculation and place-value to find the solution.

Recommended Pacing

Chapter 15: Calendar: 1-2 weeks or during Calendar Math time
Chapter 6: Ordinal Numbers: 1 week
Chapter 10: Weight and Chapter 19: Money: infused throughout the year

Standards

Mathematical Practices	
K-12.MP.1	Make sense of problems and persevere in solving them.
K-12.MP.2	Reason abstractly and quantitatively.
K-12.MP.3	Construct viable arguments and critique the reasoning of others.
K-12.MP.5	Use appropriate tools strategically.

K-12.MP.6	Attend to precision.
K-12.MP.7	Look for and make use of structure.
Interdisciplinary Connections	
ELA	
Math journal, math vocabulary discussions, reading topic-related books, providing explanations	
SL.1.1.	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. C. Ask questions to clear up any confusion about the topics and texts under discussion.
SL.1.3.	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
SL.1.6.	Produce complete sentences when appropriate to task and situation.
Integration of Technology	
Use of SmartBoard, playing online games	
8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Instructional Focus

Enduring Understandings:	**Essential Questions:**
Calendars are used to show days, weeks, and months of a year. Numbers and words can be used to describe order and position. The weight of things can be compared and measured with nonstandard units. Using different nonstandard units may give different measurements for the same item. Most measurements have some degree of uncertainty. Penny, nickel, dime, and quarter are coins that can be counted and exchanged.	What numbers can be used to describe order? What numbers can be used to describe position? Why do we measure? Why do we need standardized units of measurement? How does what we measure influence how we measure? When and why do we use money? How do we find the total value of a group of different coins? How do you calculate change?

To count the value of different coins, arrange the coins in order, begin with the coin of the greatest value, and then count on or skip count from that coin to find the total value. Money values can be added and subtracted.	
Evidence of Learning (Assessments)	
Objectives (SLO)	
Students will know: ● calendar ● seasons ● ordinal Numbers ● position Words ● about ● unit ● as heavy as ● New money terms*: value, exchange*	Students will be able to: ● Read a calendar. ● Name the days of the week, months of the year, and seasons. ● Write the date. ● Use ordinal numbers. ● Use position words to name relative positions. ● Compare the weight of two things using the terms heavy, heavier, light, lighter, and as heavy as. ● Compare the weight of more than two objects using the terms lightest and heaviest. ● Use a nonstandard object to find the weight of things (such as a balance). ● Compare weight using a nonstandard object as a unit of measurement. ● Use the term "unit" when writing the weight of things. ● Explain why there is a difference in a measurement when using different nonstandard units. ● Recognize and name penny, nickel, dime, quarter, and the cents symbol. ● Skip-count to find the value of a collection of coins. ● Exchange one coin for a set of coins of equal value. ● Use different combinations of coins less than 25 cents to buy things. ● Count money in cents up to $1 using the "count on" strategy. ● Choose the value of coins when buying items. ● Use different combinations of coins to show the same value. ● Add to find the cost of items. ● Subtract to find the change. ● Add and subtract money in cents (up to $1).

	• Solve real world problems involving addition and subtraction of money.

Suggested Resources/Technology Tools

Math In Focus Resources Chapter 15: Calendar
Math In Focus Resources Chapter 6: Ordinal Numbers
Math In Focus Resources Chapter 10: Weight
Math In Focus Resources Chapter 19: Money

Resources and Manipulatives
Calendar
Balance Scale
Plastic Coins
Hundred Chart

Online Resources
Math In Focus Student Interactivities
Math In Focus Virtual Manipulatives:
https://www-k6.thinkcentral.com/content/hsp/math/mathinfocus/common/itools_pri_9780547673851_/measurement.html Weight, Virtual Calendar, Virtual Money
https://www.ixl.com/math/grade-1 Grade 1 Concepts by Topic
http://www.abcya.com/learning_coins.htm Learning and Sorting Coins
https://jr.brainpop.com/math/money/countingcoins/ Counting Coins Video
https://jr.brainpop.com/math/money/dollarsandcents/ Dollars and Cents Video
https://www.youtube.com/watch?v=RVpcZ5obmsM&list=PLQK2XiUY9C2gXua-_3AB_nI49hpPVq01y&index=12&t=0s Adding Money Video
https://jr.brainpop.com/math/time/calendaranddates/ Calendar Video
https://jr.brainpop.com/math/measurement/ouncespoundsandtons/ Ounces, Pounds and Tons Video

Modifications

*These are only suggested ideas to modify instruction, modifications and accommodations should be tailored to each student's IEP and needs. Also, see textbook for Differentiated Instruction ideas in each chapter.

Special Education - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention
ELL - Using simplified language, modeling, visual aids, manipulatives, vocabulary with images and examples
Gifted and Talented - Enrichment book, Put on Your Thinking Cap pages and resources, higher-level questions, challenge packets, KenKen and other puzzles, leading group work
504 - Reteach/Extra practice pages, anchor charts, scaffolded explanations of topics, manipulatives, extra time for work, group work, visual aids, modeling, hands-on learning activities, small group work for more individualized attention

21ST CENTURY LIFE AND CAREER STANDARDS

Please select all standards that apply to this unit of study:

- ❑ Act as a responsible and contributing citizen and employee.
- ❑ Apply appropriate academic and technical skills.
- ❑ Attend to personal health and financial well being.
- ❑ Communicate clearly and effectively and with reason.
- ❑ Consider the environmental social and economics impacts of decisions.
- ❑ Demonstrate creativity and innovation.
- ❑ Employ valid and reliable research strategies.
- ❑ Utilize critical thinking to make sense of problems and persevere in solving them.
- ❑ Model integrity, ethical leadership, and effective management.
- ❑ Plan education and career paths aligned to personal goals.
- ❑ Use technology to enhance productivity.
- ❑ Work productively in teams while using cultural global competence.

Suggestions on integrating these standards can be found at: http://www.state.nj.us/education/cccs/2014/career/9.pdf

LINKS TO CAREERS: