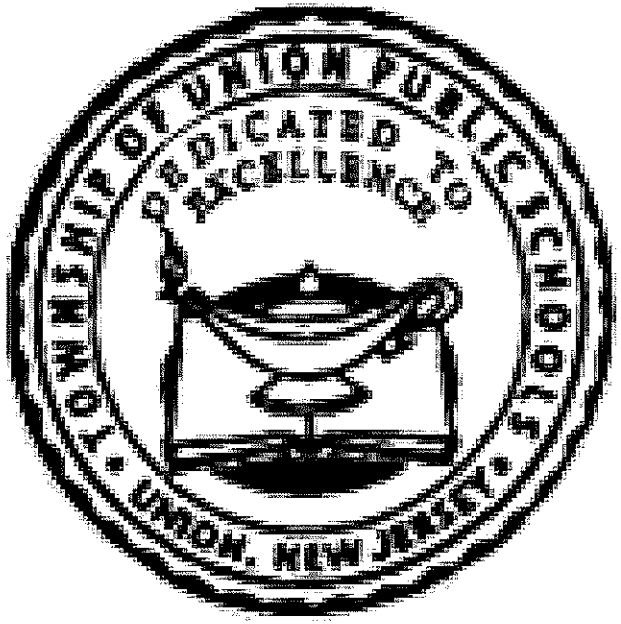
TOWNSHIP OF UNION PUBLIC SCHOOLS



Mathematics Grade 1

Curricular Frameworks Units 1-4

Curriculum Guide

Updated December 18, 2018

Mission Statement

The mission of the Township of Union Public Schools is to build on the foundations of honesty, excellence, integrity, strong family, and community partnerships. We promote a supportive learning environment where every student is challenged, inspired, empowered, and respected as diverse learners. Through cultivation of students' intellectual curiosity, skills and knowledge, our students can achieve academically and socially, and contribute as responsible and productive citizens of our global community.

Philosophy Statement

The Township of Union Public School District, as a societal agency, reflects democratic ideals and concepts through its educational practices. It is the belief of the Board of Education that a primary function of the Township of Union Public School System is to formulate a learning climate conducive to the needs of all students in general, providing therein for individual differences. The school operates as a partner with the home and community.

Statement of District Goals

- Develop reading, writing, speaking, listening, and mathematical skills.
- Develop a pride in work and a feeling of self-worth, self-reliance, and self-discipline.
- Acquire and use the skills and habits involved in critical and constructive thinking.
- Develop a code of behavior based on moral and ethical principles.
- Work with others cooperatively.
- Acquire a knowledge and appreciation of the historical record of human achievement and failures and current societal issues.
- Acquire a knowledge and understanding of the physical and biological sciences.
- Participate effectively and efficiently in economic life and the development of skills to enter a specific field of work.
- Appreciate and understand literature, art, music, and other cultural activities.
- Develop an understanding of the historical and cultural heritage.
- Develop a concern for the proper use and/or preservation of natural resources.
- Develop basic skills in sports and other forms of recreation.

Pacing Guide

Content

Unit 1	**September, October, November**
Unit 2	**December, January**
Unit 3	**February, March**
Unit 4	**April, May, June**

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 1 **Addition and Subtraction Concepts & Strategies**	• 1.OA.A.1* • 1.OA.B.3* • 1.OA.B.4 • 1.OA.C.5 • 1.OA.D.7* • 1.OA.D.8*	• Represent and solve problems involving addition and subtraction • Understand and apply properties of operations and the relationship between addition and subtraction • Add and subtract within 20 • Work with addition and subtraction equations • Extend the counting sequence	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Unit 1: Suggested Open Educational Resources	1.OA.A.1 Sharing Markers 1.OA.B.3 Domino Addition 1.OA.B.4 Cave Game Subtraction 1.OA.D.7 Equality Number Sentences 1.OA.D.8 Kiri's Mathematics Match Game		
Unit 2 **Addition and Subtraction Strategies within 20**	• 1.OA.B.3* • 1.OA.C.5 • 1.OA.C.6* • 1.OA.A.2 • 1.OA.B.4 • 1.OA.A.1* • 1.OA.D.8 • 1.OA.D.7	• Understand and apply a variety of strategies for addition and subtraction • Represent and solve problems involving addition and subtraction • Work with addition and subtraction equations • Understand and apply properties of operations and the relationship between addition and subtraction • Add and subtract within 20	
Unit 2: Suggested Open Educational Resources	1.OA.B.3 Doubles? 1.OA.C.6 $20 Dot Map 1.OA.A.2 Daisies in vases 1.OA.B.4 Cave Game Subtraction 1.OA.A.1 School Supplies 1.OA.D.8 Find the Missing Number 1.OA.D.7 Valid Equalities?		
Unit 3 **Numbers and**	• 1.NBT.A.1 • 1.NBT.B.2a-c • 1.NBT.B.3	• Understand place value • Extend the counting sequence • Use place value understanding and properties of operations	MP.1 Make sense of problems and persevere in solving them.

Operations in Base Ten	• 1.NBT.C.5 • 1.OA.C.6* • 1.NBT.C.4* • 1.NBT.C.6	to add and subtract • Represent and solve problems involving addition and subtraction. • Add and subtract within 20	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Unit 3: Suggested Open Educational Resources	1.NBT.A.1 Start/Stop Counting 2 1.NBT.A.1 Hundred Chart Digit Game 1.NBT.A.1 Where Do I Go? 1.NBT.B.2 Roll & Build 1.NBT.B.3 Ordering Numbers 1.NBT.C.5 Number Square 1.OA.C.6 Making a ten 1.NBT.C.4 Ford and Logan Add 45+36		
Unit 4 **Measurement, Data, & Geometry**	• 1.G.A.1 • 1.G.A.2 • 1.G.A.3 • 1.OA.A.1* • 1.OA.C.6* • 1.NBT.A.1* • 1.NBT.C.4*	• Tell and write time • Measure lengths indirectly by iterating length units • Reason with shapes and their attributes • Represent and solve problems involving addition and subtraction. • Add and subtract within 20 • Extend the counting sequence • Use place value understanding and properties of operations to add and subtract	
Unit 4: Suggested Open Educational Resources	1.G.A.1 All vs. Only some 1.G.A.1 3-D Shape Sort 1.G.A.2 Make Your Own Puzzle 1.G.A.2 Overlapping Rectangles 1.G.A.3 Equal Shares 1.OA.A.1 Twenty Tickets 1.NBT.A.1 Where Do I Go?		

Unit 1 Grade 1		
Content Standards	**Suggested Mathematical Practices**	**Critical Knowledge & Skills**
• 1.OA.A.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*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics.	Concept(s): • Symbol (unknowns) can be in any position. Students are able to: • add, using objects and drawings, to solve word problems involving situations of adding to and putting together. • subtract, using objects and drawings, to solve world problems involving situations of taking from and taking apart.

equations with a symbol for the unknown number to represent the problem. *(benchmarked)	MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.	Learning Goal 1: Use addition and subtraction within 10 to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.
• 1.OA.B.3. Apply properties of operations as strategies to add and subtract. *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.) (Students need not use formal terms for these properties)* *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Knowing 4 + 3 means that 3 + 4 is also known (commutative property/fact families). • When adding, the numbers need not be added in any particular order. Students are able to: • add and subtract, within 10, using properties of operations as strategies (commutative property). Learning Goal 2: Apply properties of operations (commutative property) as strategies to add or subtract within 10.
• 1.OA.B.4. Understand subtraction as an unknown-addend problem. *For example, subtract 10 - 8 by finding the number that makes 10 when added to 8*	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Subtraction can be represented as an unknown-addend problem. • Finding 9 minus 3 means solving ? + 3 = 9 or 3 + ? = 9 (fact families). Students are able to: • represent subtraction as an unknown addend problem. • solve subtraction problems, within 10, using unknown addends. Learning Goal 3: Solve subtraction problems, within 10, by representing subtraction as an unknown added problem and finding the unknown addend
• 1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting 2 to add 2).	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): • Counting can be used to add and subtract. Students are able to: • count on to add. • count back to subtract. Learning Goal 4: Count on to add and count backwards to subtract to solve addition and subtraction problems within 20.
• 1.OA.D.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.*	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): • The meaning of the equal sign • True and false statements • The expression can be on the right side of the equal sign (*e.g. 7 = 8 – 1*). • Both the left and right side of the equal sign may contain expressions (e.g. 5 + 2 = 1 + 4). Students are able to: • determine if addition equations are true or false. • determine if subtraction equations are true or false. Learning Goal 5: Determine if addition and subtraction equations, within 20, are true or

		false.
• 1.OA.D.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 = _ .* *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: • determine the unknown number that makes an equation true. • solve addition or subtraction equations by finding the missing whole number. Learning Goal 6: Solve addition and subtraction equations, within 20, by finding the missing whole number in any position.

Township of Union Unit 1 Grade 1	
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards. • Go Math Reteach and Enrich resources • Small group instruction • Teacher facilitation and intervention during cooperative group/partner work • Differentiated math centers • Exit slips • Self-checklists	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* • Go Math Mid-Chapter Checkpoint quizzes • Go Math chapter assessments • Addition and subtraction fact quizzes • Getting Ready for PARCC assessments • Benchmark assessments • Extended Constructed Response (ECR) to assess students' progress with concepts and ability to explain them

Focus Mathematical Concepts

Districts should consider listing prerequisites skills. Concepts that include a focus on relationships and representation might be listed as grade level appropriate.

Prerequisite Skills: establish number sense, count to 100, understand addition as putting together and subtracting as taking apart, fluently add and subtract within 5, add and subtract within 10, solve addition and subtraction word problems

Common Misconceptions: may not understand math vocabulary, may not correctly use the pictures or counters to find the sum, may not understand how to use a bar model to add or subtract, may subtract all instead of subtracting 0 or 0 instead of all, may not understand how to take apart to subtract, may count on by saying the starting number as the first number they count on, may have difficulty changing the order of the addends/understanding the Commutative Property of Addition, may not identify the greater addend, may count on incorrectly, may include the starting number when counting back to subtract, may count on instead of back, may incorrectly count manipulatives (counters, cubes) may use an incorrect doubles fact, may have difficulty recognizing doubles plus one or doubles minus one facts and utilizing the strategies, may count the full ten frame as one instead of ten, may have difficulty making a ten to add, when adding three digits, students may compute the sum of the first two addends incorrectly and end up with an incorrect sum for all three addends, may not add the third addend, may draw an incorrect number of symbols when using pictures to solve problems, may not understand how to use the numbers from the addition sentence in the subtraction sentence, may not understand that the same three numbers are used in the addition facts as in the subtraction facts, may not

understand how to break apart numbers, may not understand how to use addition to subtract

Number Fluency (for grades K-5):

Grade	Required Fluencies
K	Fluently add/subtract within 5
1	Add/Subtract within 20, demonstrating fluency for addition and subtraction within 10

District/School Tasks	**District/School Primary and Supplementary Resources**
Exemplar tasks or illustrative models could be provided. • iReady online program to practice and assess math skills • Go Math lessons (Chapters 1-2) • Animated Math Models Skills 1-27 (concepts related to addition and subtraction) • Introduce the game Addition Bingo to practice one-digit addition • Reading activities for The Class Party and Math Club to learn to read addition and subtraction number sentences • Grab and Go activity card Sum Sentences: Orange #3 (modeling addition sentences) • Independent reading activities for Join Us to model counting to 10 • Grab and Go activity card Put it Together: Blue #3 (modeling a whole and its parts) • Reading activities for Busy Bugs to practice addition • Grab and Go activity card Back and Forth: Blue #7 (match addition sentences that show the Commutative Property of Addition) • Grab and Go activity card How Many Ways?: Purple #3 (modeling a number as the sum of two parts) • Grab and Go activity card Picture This: Blue #9 (modeling subtraction) • Grab and Go activity card Apples Away: Orange #5 (modeling subtraction sentences) • Grab and Go activity card Runaway Squares: Blue #5 (modeling subtraction problems) • Introduce the game Subtraction Slide to use as a partner activity during center time • Grab and Go activity card Subtract!: Orange #9 (using subtraction to compare two sets) • Reading activities for Milk for Sale to practice subtraction facts through 10 • Introduce the game Dicky Sums and Neighborhood Sums to use as a partner activity during center time to practice and review sums to 20 • Grab and Go activity card Double Trouble: Orange #7 (modeling addition	*District/school resources and supplementary resources that are texts as well as digital resources used to support the instruction.* • Teacher and student editions for Go Math • Go Math Animated Math Models • Go Math *Personal Math Trainer* Activities • Go Math *Math on the Spot* videos • Go Math *iTools* • Reteach teacher resource for intervention • Enrich teacher resource for enrichment • Go Math student workbooks • Go Math work mats • Grab and Go Center Kit resources • Decodable books, Math Concept Readers • Think Central tools for school and home/iTools • Manipulatives (counters, connecting cubes, dominoes) • Hundreds chart • Touch Math resources • iPad math apps: Math Bingo, By ABCya Successfully Learning Mathematics, Grade 1 Barnyard Math Challenge Math Challenge 1 Grade 1 Math Addition and Subtraction for Kids Math GO Math Bumpies Splash Math Touch Math • ABCya.com

with doubles facts) • Reading activities for Doubles Fun on the Farm to practice subtraction adding equal groups to make doubles • Reading activities for Bunny Hats to practice addition • Grab and Go activity card Add with Ten: Blue #16 (modeling adding with 10) • Grab and Go activity card Make a Ten to Add: Orange #16 (review the problem-solving strategy of "making a ten") • Grab and Go activity card The Sum is the Same: Purple #16 (using different ways to make the same sum) • Grab and Go activity card Apples Away: Orange #5 (modeling subtraction sentences) • Introduce the game Under the Sea to use as a partner activity during center time to practice subtraction facts to 10 • Grab and Go activity card Plus and Minus: Purple #5 (modeling addition and subtraction as inverse operations) • Independent reading activities for Miss Bumble's Garden to practice subtraction strategies • Read Ten Red Apples to introduce the concept of subtraction or taking away • Read Ten Sly Piranhas to reinforce the concept of counting back • Practice addition and subtraction using dominos and record sheet • Grab and Go activity cards: orange 9 and blue 5 • Read Mouse Count to provide experience with adding and subtracting to 10 • Read One, Two, Skip a Few which provides 20 counting rhymes, songs and chants	• Sum Sense online fluency game for addition and subtraction http://resources.oswego.org/games/SumSense/sumadd.html http://www.oswego.org/ocsd-web/games/SumSense/sumsub.html • YouTube videos/songs

Instructional Best Practices and Exemplars

- Provide opportunities for students to use objects and counters to add and subtract
- Allow students to create and act out addition and subtraction word problems
- Create addition and subtraction sentences with pictures
- Utilize the bar model for addition and subtraction problems
- Differentiate students based on their completion of formative assessment
- Encourage students to take on an active role in group work during the differentiated activities
- Allow students to learn collaboration while working with members in their math groups
- Have students connect mathematics through literature and informational text
- Model and teach students to use verbal and writing skills and reasoning to explain how they arrived at an answer
- Utilize 21st century skills through daily usage of various technology (computers, Smartboard, iPads)
- Practice test taking strategies during small group instruction
- Use of daily routines such as Problem of the Day and Number of the Day
- Make a class story problem book
- Play addition and subtraction fact board games
- Play *Combos to 10* (Students use two different sets of objects to make a combination that shows 10)
- Use flash cards for basic fact practice

- Use playing cards to play addition and subtraction games
- Explore subtraction facts with cubes and ten frames to examine whole-part-part relationships for ten
- Read or write addition and subtraction facts books
- Have students maintain a daily math journal for problem solving
- Create anchor charts with students as new concepts, skills, and strategies are introduced, display anchor charts around the classroom for future reference
- Look for opportunities to appeal to multiple intelligences
- Provide opportunities for students to use objects (manipulatives) as they add, subtract, and solve problems
- Use information gained from formative assessments to plan appropriate, meaningful instruction that will target your students' weaknesses
- Provide your students with meaningful, differentiated assignments and station activities to work on while you meet with small groups

Students with Disabilities, English Language Learners, and Gifted & Talented Students:

Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students.

Examples of Strategies and Practices that Support Students with Disabilities:

***Refer to students' IEP for specific modifications and accommodations**

- Use of visual and multisensory formats
- Use of assisted technology
- Use of prompts
- Modification of content and student products
- Testing accommodations
- Authentic assessments

Examples of Strategies and Practices that Support Gifted & Talented Students:

- Adjusting the pace of lessons
- Curriculum compacting
- Inquiry-based instruction
- Independent study
- Higher-order thinking skills
- Interest-based content
- Student-driven instruction
- Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:

***All WIDA Can Do Descriptors can be found at:** https://wida.wisc.edu/teach/can-do/descriptors

• Pre-teaching of vocabulary and concepts
• Visual learning, including graphic organizers
• Use of cognates to increase comprehension
• Teacher modeling
• Pairing students with beginning English language skills
with students who have more advanced English language skills
• Scaffolding
•Word walls
•Sentence frames
•Think-pair-share
•Cooperative learning groups
•Teacher think-aloud

Interdisciplinary connections are made across grades and content areas to model the integration of knowledge and skills in the real world.

21st Century Themes

- Global Awareness
- Environmental Literacy
- Health Literacy
- Civic Literacy
- Financial, Economic, Business, and Entrepreneurial Literacy

21st Century Skills

- Creativity and Innovation (E)
- Critical Thinking and Problem Solving (T) (A)
- Communication (E)

- Collaboration (E) (T)

Career Ready Practices:

- CRP1: Act as a responsible and contributing citizen and employee.
- CRP2: Apply appropriate academic and technical skills.
- CRP3: Attend to personal health and financial well-being.
- CRP4: Communicate clearly and effectively and with reason.
- CRP5: Consider the environmental, social and economic impacts of decisions.
- CRP6: Demonstrate creativity and innovation.
- CRP7: Employ valid and reliable research strategies.
- CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9: Model integrity, ethical leadership and effective management.
- CRP10: Plan education and career paths aligned to personal goals.
- CRP11: Use technology to enhance productivity.
- CRP12: Work productively in teams while using global competence.

9.1 Personal Financial Literacy
This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

9.2 Career Awareness, Exploration, and Preparation
This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

9.3 Career and Technical Education
This standard outlines what students should know and be able to do upon completion of a CTE Program of Study

Technology Standards: Technology standards are embedded throughout all curricular units.

8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

8.2 Technology Education, Engineering, Design and Computational Thinking - Programming
All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

Unit 2 Grade 1		
Content Standards	**Suggested Standards for Mathematical Practice**	**Critical Knowledge & Skills**
• 1.OA.B.3. Apply properties of operations as strategies to add and subtract. *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.) (Students need not use formal terms for these properties)* *(benchmarked)	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • When adding, the numbers need not be added in order. • To add 2 + 6 + 4, the second two numbers can be added first to make a ten. [e.g., 2 + 6 + 4 = 2 + 10 = 12 (Associative Property)] Students are able to: • add and subtract, within 20, using properties of operations as strategies. (Associative Property) Learning Goal 1: Apply properties of operations as strategies (Associative Property) to add or subtract within 20.
• 1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting 2 to add 2).	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Counting can be used to add and subtract. Students are able to: • count on to add. • count back to subtract. Learning Goal 2: Count on to add and count backwards to subtract to solve addition and subtraction problems within 20.
• 1.OA.C.6. Add and subtract within	MP.1 Make sense of problems and	Concept(s):

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). *(benchmarked)	persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	• Different strategies can be used to add and subtract. Students will be able to: • add and subtract within 20, using the following strategies: – counting on; – making ten; – composing numbers; – decomposing numbers leading to a ten; – relationship between addition and subtraction, and – creating equivalent but easier or known sums. • fluently add or subtract whole numbers within 20. Learning Goal 3: Add and subtract whole numbers within 20 using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc.
• 1.OA.A.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*	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics.	Concept(s): • Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in any position. Students are able to: • use *objects and drawings* to represent word problems that call for less than or equal to 20. Learning Goal 4: Solve addition word problems with three whole numbers with sums less than or equal to 20.
• 1.OA.B.4. Understand subtraction as an unknown-addend problem. *For example, subtract 10 - 8 by finding the number that makes 10 when added to 8*	MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): • Subtraction can be represented as an unknown-addend problem. • Finding 9 minus 3 means solving ? + 3 = 9 or 3 + ? = 9 (fact families). Students are able to: • represent subtraction as an unknown addend problem. • solve subtraction problems, within 10, using unknown addends. Learning Goal 5: Solve subtraction problems, within 10, by representing subtraction as an unknown added problem and finding the unknown addend
• 1.OA.A.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.* *(benchmarked)	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.6 Attend to precision.	Concept(s): • Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in any position. Students are able to: • add, using drawings and equations, to solve word problems involving situations of adding to and putting together. • subtract, using drawings and equations, to solve world problems involving situations of taking from and taking apart. Learning Goal 6: Use addition and subtraction within 20 to solve problems, including word

		problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.
• 1.OA.D.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 = _.* *(benchmarked)	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • determine the unknown number that makes an equation true. • solve addition or subtraction equations by finding the missing whole number. Learning Goal 7: Solve addition and subtraction equations, within 20, by finding the missing whole number in any position.
• 1.OA.D.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.* *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: • determine if addition equations are true or false • determine if subtraction equations are true or false Learning Goal 8: Determine if addition and subtraction equations, within 20, are true or false.

Township of Union, Unit 2 Grade 1	
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards. • Go Math *Show What You Know* Quizzes (at the start of each chapter) • Go Math *Share and Show* Activities for each lesson • Go Math Reteach and Enrich resources • Small group instruction • Teacher facilitation and intervention during cooperative group/partner work • Differentiated math centers • Exit slips • Self-checklists	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* • Go Math Mid-Chapter Checkpoint quizzes • Go Math chapter assessments • Addition and subtraction fact quizzes • Getting Ready for PARCC assessments • Benchmark assessments • Extended Constructed Response (ECR) to assess students' progress with concepts and ability to explain them
Focus Mathematical Concepts	
Prerequisite skills: represent and solve problems involving the joining and separating of sets, understand addition as putting together and adding to, understand subtraction as taking apart and taking from	

Common Misconceptions: may misunderstand the meaning of the equal sign, may assume that a key word or phrase in a problem suggests the same operation will be used every time, may assume that the commutative property applies to subtraction, may think that the equal sign means that an operation must be performed on the numbers on the left and that the result of this operation is written on the right, may add or subtract incorrectly, may record an incorrect sum, may start with the first addend rather than the greater addend when counting on to add, may not identify doubles facts, may not identify which doubles fact to use when solving doubles plus and minus 1 problems, may identify a strategy to use that does not work with a given fact, may include the starting number when counting on or back, may count a full ten frame as 1 instead of 10, may make ten but forget to subtract from the other addend (when making ten), may incorrectly decompose the second addend when making ten, may compute the sum for the first two addends incorrectly and end up with an incorrect sum when adding three addends, may forget to add the third addend when adding three numbers, may draw the incorrect number of symbols when drawing a picture to solve problems, may not understand how to use the numbers from an addition sentence in a related subtraction sentence, may not understand that the same three numbers can be used in related addition and subtraction facts, may consider the counters used to count from 10 to the total number as the answer when making a ten to subtract, may not know how to break apart the number they are subtracting when using the break apart strategy, may confuse the missing part with the given part, may not comprehend the action described in a problem, may incorrectly find a missing number for related facts, may think that facts are related if they add and subtract the same numbers, may not record the correct sum or difference, may model an addition fact with an unknown addend by joining cube trains for the given addend and sum, may not understand how to complete a triangle diagram for related facts, may choose the wrong operation for a problem, may make a number with subtraction using the target number as the starting number

Number Fluency (for grades K-5):

Grade	Required Fluencies
K	Fluently add/subtract within 5
1	Add/Subtract within 20, demonstrating fluency for addition and subtraction within 10

District/School Tasks	**District/School Primary and Supplementary Resources**
• iReady online program to practice and assess math skills • Go Math Lessons (Chapters 3-5) • Go Math Interactive Student Edition • Animated Math Models Skills 1-27 (concepts related to addition and subtraction) • Grab and Go activity card *Back and Forth*: Blue #7 (the Commutative Property of Addition) • Reading activities for Join Us to practice adding up to ten • Introduce the game *Ducky Sums* to practice one-digit addition and review basic facts to 12. • Grab and Go activity card *Another Way to Add*: Purple #7 (addition using a number line) • Grab and Go activity card *Double Trouble*: Orange #7 (addition with doubles facts) • Reading activities for Doubles Fun on the Farm to practice adding equal groups to make doubles	*District/school resources and supplementary resources that are texts as well as digital resources used to support the instruction.* • Teacher and student editions for Go Math • Go Math Animated Math Models • Go Math *Personal Math Trainer* Activities • Go Math *Math on the Spot* videos • Go Math *iTools* • Reteach teacher resource for intervention • Enrich teacher resource for enrichment • Go Math student workbooks • Go Math work mats • Grab and Go Center Kit resources • Decodable books, Math Concept Readers • Think Central tools for school and home/iTools • Manipulatives (counters, connecting cubes, dominoes)

- Grab and Go activity card *Add with Ten*: Blue #16 (addition with 10)
- Reading activities for Funny Bunny Hats to practice adding
- Introduce the game *Neighborhood Sums* to practice and review sums to 20.
- Grab and Go activity card *Make a Ten to Add*: Orange #16 (making a ten to problem solve)
- Grab and Go activity card *The Sum is the Same*: Purple #16 (different ways to find the same sum)
- Grab and Go activity card *Apples Away*: Orange #5 (modeling subtraction sentences)
- Reading activities for Math Club to learn to read number sentences
- Introduce the game *Under the Sea* to practice subtraction facts to 12.
- Grab and Go activity card *Plus and Minus*: Purple #5 (addition and subtraction as inverse relations)
- Reading activities for Miss Bumble's Garden to practice subtraction strategies
- Grab and Go activity card *Runaway Squares*: Blue #5 (modeling subtraction problems)
- Reading activities for The Class Party to practice reading addition and subtraction sentences
- Grab and Go activity card *Picture This*: Blue #9 (modeling subtraction)
- Grab and Go activity card *Problem Solving*: Purple #11 (choosing the correct operation to solve a problem)
- Reading activities for Picture Puzzles to learn about addition and subtraction facts through 12
- Grab and Go activity card *Face Facts*: Orange #11 (modeling fact families for 11 and 12)
- Introduce the game *Related Facts Race* to practice naming related subtraction facts to 8
- Grab and Go activity card *Number Tales*: Purple #18 (exploring and modeling related facts)
- Grab and Go activity card *The Missing Piece*: Blue #18 (modeling subtraction to find a given difference)
- Reading activities for Juggling to practice addition and subtraction facts through 12
- Grab and Go activity card *Any Way You Cut It*: Blue #11 (expressing the same number as a sum or difference)
- Introduce the game *Basic Facts Race* to practice finding numbers in addition and subtraction sentences.
- Reading activities for Garden Party to practice subtraction

- Hundreds chart
- Touch Math resources
- iPad math apps:
  Door 24 Plus
  Math Bingo, By ABCya
  Successfully Learning Mathematics, Grade 1
  Barnyard Math Challenge
  Math Challenge 1
  Grade 1 Math
  Addition and Subtraction for Kids
  Math GO
  Math Bumpies
  Splash Math
  Touch Math
- ABCya.com
- MathChimp.com
- ixl.com
- Free Math Games Online
- Internet4classrooms.com Games
- Sum Sense online fluency game for addition and subtraction
  http://resources.oswego.org/games/SumSense/sumadd.html
  http://www.oswego.org/ocsd-web/games/SumSense/sumsub.html
- YouTube videos/songs

Instructional Best Practices and Exemplars

- Create anchor charts with students as new concepts, skills, and strategies are introduced. Display anchor charts around the classroom for future reference.
- Look for opportunities to appeal to multiple intelligences.
- Provide opportunities for students to use objects (manipulatives) as they add, subtract, and solve problems.

- Use information gleaned from formative assessments to plan appropriate, meaningful instruction that will target your students' weaknesses.
- Provide your students with meaningful, differentiated assignments and station activities to work on while you meet with small groups.
- When possible, integrate technology into your lesson through the use of computers, Smartboard, and iPads (if available).
- Have students tell, act out, and record addition and subtraction stories using objects or pictures and story mats.
- Make a class story problem book.
- Play addition and subtraction fact board games.
- Play *Combos to 10* (Students use two different sets of objects to make a combination that shows 10).
- Use flash cards for basic fact work.
- Use playing cards to play addition and subtraction games.
- Explore subtraction facts with cubes and ten frames to examine whole-part-part relationships for ten.
- Read or write addition and subtraction facts books.
- Make a fact family book.
- Provide students with an addition or subtraction fact. Have them brainstorm a list of different strategies that can be used to solve it. Facilitate a discussion on which strategy or strategies are the *best* for that fact. Encourage students to explain their reasoning.
- Have students maintain a daily math journal for problem solving.
- Have *Number Talks* daily. (Teacher provides the problem. Teacher provides students an opportunity to solve the problem mentally. Students show a visual cue when they are ready with a solution. Students signal if they have solved it in more than one way. Teacher calls for answers. She or he collects all answers, and records them (correct *and* incorrect). Students share strategies and justifications with peers.)
- Provide students with opportunities to work collaboratively with a group to solve problems.
- Have students connect mathematics through literature and informational text.
- Model and teach students to use verbal and writing skills and reasoning to explain how they arrived at an answer.
- Utilize 21st century skills through daily usage of various technology.
- Practice test taking strategies during small group instruction.
- Use of daily routines such as Problem of the Day and Number of the Day.

Students with Disabilities, English Language Learners, and Gifted & Talented Students:

Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students.

Examples of Strategies and Practices that Support Students with Disabilities:
***Refer to students' IEP for specific modifications and accommodations**
• Use of visual and multisensory formats
• Use of assisted technology
• Use of prompts
• Modification of content and student products
• Testing accommodations

• Authentic assessments

Examples of Strategies and Practices that Support Gifted & Talented Students:
• Adjusting the pace of lessons
• Curriculum compacting
• Inquiry-based instruction
• Independent study
• Higher-order thinking skills
• Interest-based content
• Student-driven instruction
• Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:
***All WIDA Can Do Descriptors can be found at:** https://wida.wisc.edu/teach/can-do/descriptors
• Pre-teaching of vocabulary and concepts
• Visual learning, including graphic organizers

• Use of cognates to increase comprehension
• Teacher modeling
• Pairing students with beginning English language skills
with students who have more advanced English language skills
• Scaffolding
•Word walls
•Sentence frames
•Think-pair-share
•Cooperative learning groups
•Teacher think-aloud

Interdisciplinary connections are made across grades and content areas to model the integration of knowledge and skills in the real world.

21st Century Themes

- Global Awareness
- Environmental Literacy

- Health Literacy
- Civic Literacy
- Financial, Economic, Business, and Entrepreneurial Literacy

21st Century Skills

- Creativity and Innovation (E)
- Critical Thinking and Problem Solving (T) (A)
- Communication (E)
- Collaboration (E) (T)

Career Ready Practices:
- CRP1: Act as a responsible and contributing citizen and employee.
- CRP2: Apply appropriate academic and technical skills.
- CRP3: Attend to personal health and financial well-being.
- CRP4: Communicate clearly and effectively and with reason.
- CRP5: Consider the environmental, social and economic impacts of decisions.
- CRP6: Demonstrate creativity and innovation.
- CRP7: Employ valid and reliable research strategies.
- CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9: Model integrity, ethical leadership and effective management.
- CRP10: Plan education and career paths aligned to personal goals.
- CRP11: Use technology to enhance productivity.
- CRP12: Work productively in teams while using global competence.

9.1 Personal Financial Literacy
This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

9.2 Career Awareness, Exploration, and Preparation

This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

9.3 Career and Technical Education
This standard outlines what students should know and be able to do upon completion of a CTE Program of Study

Technology Standards: Technology standards are embedded throughout all curricular units.

8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

8.2 Technology Education, Engineering, Design and Computational Thinking - Programming
All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

Unit 3 Grade 1		
Content Standards	**Suggested Standards for Mathematical Practice**	**Critical Knowledge & Skills**
• 1.NBT.A.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 *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically MP.6 Attend to precision. . MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Number names and the count sequence up to 100 Students are able to: • count orally by ones up to 100. • count up to 100 beginning at any number less than 100. • read numerals up to 100. • write numerals up to 100. • represent a number of objects up to 100 with a written number. Learning Goal 1: Count to 120 orally, read and write numerals, and write numerals to represent the number of objects (up to 120).
• 1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.B.2. a. 10 can be	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others.	Concept(s): • Two digits represent amounts of tens and ones. • 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). Students are able to: • compose tens to make numbers up to 90.

thought of as a bundle of ten ones — called a "ten." 1.NBT.B.2. b. 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.B.2.c. 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). *(benchmarked)	MP.4 Model with mathematics. MP.5 Use appropriate tools strategically MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	• decompose numbers up to 90, into tens. • identify the value of the number in the tens or ones place. Learning Goal 2: Compose and decompose numbers to 90 into tens, identifying the value of the number in the tens and ones place.
• 1.NBT.B.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Use place value understanding to compare two digit numbers. • Comparing numbers using symbols. Students are able to: • use the meaning of tens and ones digits to compare 2 two-digit numbers using >, =, and < symbols. Learning Goal 3: Use the meaning of tens and ones digits to record comparisons of 2 two-digit numbers using >, =, and < symbols.
• 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.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision.	Concept(s): No new concept(s) introduced Students are able to: • given a two-digit number, find 10 more than the number without counting. • given a two-digit number, find 10 less than the number without counting. • explain, given a two-digit number, how to find 10 more or ten less than the number without counting. Learning Goal 4: Explain, given a two-digit number, how to find 10 more or ten less than the number without having to count.
• 1.OA.C.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	MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision.	Concept(s): • Different strategies can be used to add and subtract. Students will be able to: • add and subtract within 20, using the following strategies: – counting on; – making ten; – composing numbers;

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). *(benchmarked)		– decomposing numbers leading to a ten; – relationship between addition and subtraction, and – creating equivalent but easier or known sums. • fluently add or subtract whole numbers within 20. Learning Goal 5: Add and subtract whole numbers within 20 using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc.
• 1.NBT.C.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 (e.g. base ten blocks) 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. *(benchmarked)	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • In adding two-digit numbers, add tens with tens and ones with ones. • In adding two-digit numbers, sometimes it is necessary to compose a ten. Students are able to: • use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number. • use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number. • use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10. • use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10. • explain or show how the model relates to the strategy. Learning Goal 6: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100). Learning Goal 7: Add a 2-digit number and a multiple of 10, using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).
• 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.	MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • use concrete models and drawings with a strategy based on place value to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90). • use concrete models and drawings with properties of operations to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90). • explain or show how the model relates to the strategy. Learning Goal 8: Subtract a multiple of 10 from a multiple of 10 (both within the range 10-90) using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).
• 1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and	MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics.	Concept(s): • Number names and the count sequence up to 100 Students are able to:

represent a number of objects with a written numeral *(benchmarked)	MP.5 Use appropriate tools strategically MP.6 Attend to precision. . MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	• count orally by ones up to 100. • count up to 100 beginning at any number less than 100. • read numerals up to 100. • write numerals up to 100. • represent a number of objects up to 100 with a written number. Learning Goal 1: Count to 120 orally, read and write numerals, and write numerals to represent the number of objects (up to 120).
• 1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.B.2. a. 10 can be thought of as a bundle of ten ones — called a "ten." 1.NBT.B.2. b. 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.B.2.c. 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). *(benchmarked)	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Two digits represent amounts of tens and ones. • 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). Students are able to: • compose tens to make numbers up to 90. • decompose numbers up to 90, into tens. • identify the value of the number in the tens or ones place. Learning Goal 2: Compose and decompose numbers to 90 into tens, identifying the value of the number in the tens and ones place.
• 1.NBT.B.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Use place value understanding to compare two digit numbers. • Comparing numbers using symbols. Students are able to: • use the meaning of tens and ones digits to compare 2 two-digit numbers using >, =, and < symbols. Learning Goal 3: Use the meaning of tens and ones digits to record comparisons of 2 two-digit numbers using >, =, and < symbols.
• 1.NBT.C.5. Given a two-digit number, mentally find 10 more or	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and	Concept(s): No new concept(s) introduced Students are able to:

10 less than the number, without having to count; explain the reasoning used.	quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision.	• given a two-digit number, find 10 more than the number without counting. • given a two-digit number, find 10 less than the number without counting. • explain, given a two-digit number, how to find 10 more or ten less than the number without counting. Learning Goal 4: Explain, given a two-digit number, how to find 10 more or ten less than the number without having to count.

Township of Union Unit 3 Grade 1	
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards. • Go Math *Show What You Know* Quizzes (at the start of each chapter) • Go Math *Share and Show* Activities for each lesson • Go Math Reteach and Enrich resources • Small group instruction • Teacher facilitation and intervention during cooperative group/partner work • Differentiated math centers/stations • Exit slips • Self-checklists	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* • Go Math Mid-Chapter Checkpoint quizzes • Go Math chapter assessments • Getting Ready for PARCC assessments • Benchmark assessments • Extended Constructed Response (ECR) to assess students' progress with concepts and ability to explain them

Focus Mathematical Concepts

Prerequisite skills: know number names and the count sequence, count to tell the number of objects, work with numbers 11-19 (to gain foundations for place value), compare numbers between 1 and 10, understand addition as putting together and adding to, and understand subtraction as taking apart and taking from

Common Misconceptions: may not understand math vocabulary, may omit the zero in the numbers 101 through 109, may think that counting by tens means they skip ten numbers and write the eleventh number, may give the number of tens a value of 1 instead of 10, may count incorrectly when making a group of 10, may count each group [of tens] by ones instead of tens, may reverse the digits when writing numbers, may have difficulty differentiating tens and ones, may show a different number of tens but the same number of ones [when showing a number in different ways], may add 10 more instead of 1 more [when adding ones to tens], may not count the 11th ten and include it in their number [when working with numbers 110 through 120], may not be able to differentiate whether the tens or ones place helped them determine which number is greater or less, may rely on the order numbers appear rather than the value to complete comparisons, may use the incorrect symbol when comparing numbers, may not follow directions carefully in story problems, may identify numbers that are 1 less/more than a given number rather than 10 less/more, may confuse operation symbols, may add tens but write a sum as ones, may count on by ones when adding tens to a number, may reverse digits in two-digit addends, may add all the ones together and combine the digits [when adding two digit numbers], may not

recognize the value of tens and add the number of tens to the number of ones to find a sum, may confuse counting on and counting back, may add a one-digit number as a ten [when adding two-digit numbers]

Number Fluency (for grades K-5):

Grade	Required Fluencies
K	Fluently add/subtract within 5
1	Add/Subtract within 20, demonstrating fluency for addition and subtraction within 10

District/School Tasks	**District/School Primary and Supplementary Resources**
Exemplar tasks or illustrative models could be provided. • iReady online program to practice and assess math skills • Go Math Lessons (Chapters 6-8) • Go Math Interactive Student Edition • Animated Math Models Skills 25-38 (Concepts related to place value) • Grab and Go activity card *Teen Time*: Orange #14 (modeling numbers 11 to 19) • Reading activities for Join Us to practice adding up to ten • Grab and Go activity card *Groups of Ten*: Blue #14 (modeling groups of 10) • Reading activities for Strawberries to practice using place value to find numbers • Introduce the game *Puddle Hopping* to practice naming numbers that are ten more and ten less than a given number • Grab and Go activity card *Ten and Up*: Purple #14 (place value and numbers from 10 to 50) • Introduce the game *Tens and Ones Race* to practice decomposing numbers into tens and ones • Introduce the game *The Greater Game* to practice comparing numbers in the teens • Reading activities for Name that Number to practice comparing numbers and complete a hundred chart • Grab and Go activity card *20 through 50*: Orange #4 (modeling and comparing numbers) • Introduce the game *Rainy Day Fun* to practice comparing numbers in the	*District/school resources and supplementary resources that are texts as well as digital resources used to support the instruction.* • Teacher and student editions for Go Math • Go Math Animated Math Models • Go Math *Personal Math Trainer* Activities • Go Math *Math on the Spot* videos • Go Math *iTools* • Reteach teacher resource for intervention • Enrich teacher resource for enrichment • Go Math student workbooks • Go Math work mats • Grab and Go Center Kit Resources • Decodable books, Math Concept Readers • Think Central tools for school and home/iTools • Manipulatives (counters, connecting cubes, rods/units, ten frames) • Hundreds chart • iPad math apps: Number Duel Number Math Chocolate Chip Cookie Factory Math Slide Door 24 Plus Splash Math Math Regrouping Top-It

teens

- Grab and Go activity card *Add with Ten*: Blue #16 (adding with 10)
- Reading activities for Garden Party to practice subtraction
- Introduce the game *Neighborhood Sums* to practice and review sums up to 20
- Reading activities for It's a Homerun! to practice addition
- Grab and Go activity card *Count On*: Blue #20 (counting on to add two-digit numbers)
- Grab and Go activity card *Regroup*: Orange #20 (modeling addition of two-digit numbers with regrouping)
- Introduce the game *Flying Along* to practice 2-digit addition with regrouping
- Grab and Go activity card *Neat Trick*: Purple #20 (using place value and basic facts to add two-digit numbers)
- Reading activities for Party Plans to learn about 2-digit addition and subtraction with regrouping
- Introduce the game *Basic Facts Race* to practice finding missing numbers in addition and subtraction sentences

- ABCya.com
- Internet4Classrooms Interactive Math Skill Builders
- Math Chimp
- Place Value Crocodile Game
- YouTube videos/songs
  Place Value Song
  Number Gators (Greater Than, Less Than Symbols Song)
  Place Value First Grade- Tens and Ones
  Place Value Grouping Video for 1st and 2nd Grade
  Comparing Numbers- Greater Than Less Than
  Math Antics- Place Value
  Greater Than or Less Than with Allie the Alligator

Instructional Best Practices and Exemplars

- Create anchor charts with students as new concepts, skills, and strategies are introduced. Display anchor charts around the classroom for future reference.
- Use information gleaned from formative assessments to plan appropriate, meaningful instruction that will target your students' weaknesses.
- Provide your students with meaningful, differentiated assignments and station activities to work on while you meet with small groups.
- When possible, integrate technology into your lesson through the use of computers, Smartboard, and iPads (if available) to utilize 21st Century Skills.
- Provide students with opportunities to work collaboratively in groups to solve problems.
- Have students maintain a daily math journal for problem solving.
- Have students connect mathematics through literature and informational text.
- Model how to and teach students to use verbal and written responses to explain their reasoning when solving math problems.
- Practice test taking strategies during small group instruction.
- Have *Number Talks* daily. (Teacher provides the problem. Teacher provides students an opportunity to solve the problem mentally. Students show a visual cue when they are ready with a solution. Students signal if they have solved it in more than one way. Teacher calls for answers. She or he collects all answers, and records them (correct *and* incorrect). Students share strategies and justifications with peers.)
- Engage students in daily number sense routines:
  - Count Around the Circle: Choose a counting sequence and a starting number. Students sit in a circle and take turns counting on.
  - Variations: Count by ones, tens, fives, twos, threes, and so on, starting at zero or various numbers.
    - Questions: *How did you know what comes next? I noticed that you paused when it was your turn and they you figured it out. What did you do to figure it out? If we count by ones starting with (Student Name) and go all the way around the circle, what number do you think (Other Student Name) will say? Why? If we count around the circle by tens and we go around three times, what will (Student Name) say? How do you know that without counting it?*
  - Choral Counting: The whole class counts aloud a number sequence.

    - Record the numbers as students are counting to help students see and use the patterns. Prior to doing the activity, think about how many numbers you want to record in a row to help facilitate students in noticing particular patterns.
        - Questions: *What do you notice?*
    - Start and Stop Counting: Students count up from a starting number and stop when they reach a predetermined point.
        - Questions: *If we start with (number such as 25) and count by fives, what numbers could we stop at? If we count by twos and start with (number such as 22), what numbers could we stop at? Why would the number need to be even?*
- Have students put objects into groups of tens and ones using ten frames.
- Provide opportunities for students to use objects (base ten blocks, snap cubes, straws, counters, etc.) to model, compare, add, and subtract numbers.
- Create hundred chart puzzles by cutting apart hundred charts. Have students apply what they know about numbers to put them back together. Differentiate the puzzles by cutting the charts into different amounts of pieces (the more pieces the greater the challenge).
- Provide students with blank hundred charts and have them fill in the missing numbers. Differentiate by including some numbers/rows for students that need more support.
- Provide students with opportunities to use materials to build models that represent a number as tens and ones and match it to a number word and its representation as a written numeral.
- Have students use various materials to show one number in different ways: using base ten blocks, quick pics, bundles of tens and ones (straws), and ten-frames.
- Have students create concrete models of two given numbers using base ten blocks or straw bundles. Have them determine which is greater and less. Have them record a quick pic and comparison sentence.
- Ask students to visualize a given number. Guide them by describing your own thinking *I am visualizing the number 70. I see 7 tens*. Then explain how you change this visualization to show 10 less or ten more. *I want to make it ten less, so I am going to remove 1 ten. Now I have 6 tens. 6 tens is the same as 60! So 60 is ten less than 70.* Repeat with different numbers, gradually releasing support as appropriate for your class, until students are able to do it independently.
- Provide students with two digit addition or subtraction problems. Have them build a concrete model (combine the tens with tens and the ones with ones), draw a quick pic, and then write the numbers. Ask them to explain their reasoning.
- Provide students with two digit addition or subtraction problems. Have them use a hundred chart to add or subtract. Have them explain their reasoning.
- Have students tell, act out, and record addition and subtraction stories using objects or pictures and story mats.
- Make a class story problem book using two-digit numbers.

Students with Disabilities, English Language Learners, and Gifted & Talented Students:

Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways. By providing appropriately challenging learning, teachers can maximize success for all students.

Examples of Strategies and Practices that Support Students with Disabilities:

***Refer to students' IEP for specific modifications and accommodations**

• Use of visual and multisensory formats
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Examples of Strategies and Practices that Support Gifted & Talented Students:
• Adjusting the pace of lessons
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• Teacher modeling
• Pairing students with beginning English language skills
with students who have more advanced English language skills
• Scaffolding
•Word walls
•Sentence frames
•Think-pair-share
•Cooperative learning groups
•Teacher think-aloud

Interdisciplinary connections are made across grades and content areas to model the integration of knowledge and skills in the real world.

21st Century Themes

- Global Awareness
- Environmental Literacy
- Health Literacy

- Civic Literacy
- Financial, Economic, Business, and

  Entrepreneurial Literacy

21st Century Skills

- Creativity and Innovation (E)
- Critical Thinking and Problem Solving (T) (A)
- Communication (E)
- Collaboration (E) (T)

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- CRP1: Act as a responsible and contributing citizen and employee.
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8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

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All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

Unit 4 Grade 1		
Content Standards	**Suggested Standards for Mathematical Practice**	**Critical Knowledge & Skills**
• 1.G.A.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.	MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): • Defining attributes versus non defining attributes. Students are able to: • name attributes that define two-dimensional shapes (square, triangle, rectangle, regular hexagon). • name attributes that do not two-dimensional shapes. • build and draw shapes when given defining attributes. Learning Goal 1: Name the attributes of a given two-dimensional shape (square, triangle, rectangle, regular hexagon), distinguishing between defining and non-defining attributes. Learning Goal 2: Build and draw shapes when given defining 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	MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): • Shapes can be composed from other shapes (e.g. trapezoids can be composed from triangles). • New shapes can be composed from composite shapes. Students are able to: • create a composite shape using two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles).

circular cylinders) to create a composite shape, and compose new shapes from the composite shape.		• create a composite shape using three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders). • compose *new* shapes from the *composite* shapes. Learning Goal 3: Create a composite shape by composing 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), and compose new shapes from the composite shape.
• 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	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): • Shapes can be partitioned into equal parts or shares. • Equal shares are named based on the number of shares that make the whole (e.g. halves, fourths, quarters). • Shares can be described based on their relation to the whole (e.g *half of, fourth of, quarter of*). • The whole can be described based on the number of shares. • Decomposing a whole into more equal shares creates smaller shares. Students are able to: • partition circles and rectangles into two or four equal shares. • distinguish equal shares from those that are not equal. • describe shares using the words halves, fourths, and quarters. • describe the relationship between the whole and the share using the phrases *half of, fourth of,* and *quarter of.* • describe the whole as *two of,* or *four of* the shares. • decompose a whole into a greater number of equal shares and identify the new shares as smaller. Learning Goal 4: Partition circles and rectangles into two or four equal shares, describing the shares using halves, fourths, and quarters and use the phrases *half of, fourth of,* and *quarter of.* Describe the whole circle (or rectangle) partitioned into two or four equal shares as *two of,* or *four of* the shares.
• 1.OA.A.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.* *(benchmarked)	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in any position. Students are able to: • add, using objects and drawings, to solve word problems involving situations of adding to and putting together. • subtract, using objects and drawings, to solve world problems involving situations of taking from and taking apart. Learning Goal 5: Use addition and subtraction within 20 to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.

• 1.OA.C.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) *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Different strategies can be used to add and subtract. Students will be able to: • add and subtract within 20, using the following strategies: – counting on; – making ten; – composing numbers; – decomposing numbers; – relationship between addition and subtraction, and – creating equivalent but easier or known sums. • fluently add or subtract whole numbers within 20. Learning Goal 6: Add and subtract whole numbers within 20 using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc.
• 1.NBT.A.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. *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Number names and the count sequence up to 120. Students are able to: • count orally by ones up to 120. • count up to 120 beginning at any number less than 120. • read numerals up to 120. • write numerals up to 120. • represent a number of objects up to 120 with a written number. Learning Goal 7: Count to 120 orally, read and write numerals, and write numerals to represent the number of objects (up to 120).
• 1.NBT.C.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 (e.g. base ten blocks) 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	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • In adding two-digit numbers, add tens with tens and ones with ones. • In adding two-digit numbers, sometimes it is necessary to compose a ten. Students are able to: • use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number. • use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number. • use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10. • use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10. • explain or show how the model relates to the strategy. Learning Goal 8: Add a 2-digit and a 1-digit number using concrete models and drawings with

tens, ones and ones; and sometimes it is necessary to compose a ten. *(benchmarked)		a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100). Learning Goal 9: Add a 2-digit number and a multiple of 10, using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).
• 1.MD.C.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 in another.	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): • Numbers can be organized to represent data. Students are able to: • organize objects, representing data, in up to three categories. • represent data with objects, drawings, or numerals, in up to three categories. • ask and answer questions about: – the total number of data points; – the number of data points in each category, and – how many more or less are in one category than in another. Learning Goal 7: Organize, represent, and interpret data with up to three categories, compare the number of data points among the categories, and find the total number of data points.

Unit 4 Grade 4 What This May Look Like

School/District Formative Assessment Plan	School/District Summative Assessment Plan
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards. • Go Math Reteach and Enrich resources • Small group instruction • Teacher facilitation and intervention during cooperative group/partner work • Differentiated math centers • Exit slips • Self-checklists	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* • Go Math Mid-Chapter Checkpoint quizzes • Go Math chapter assessments • Addition and subtraction fact quizzes • Getting Ready for PARCC assessments • Benchmark assessments • Extended Constructed Response (ECR) to assess students' progress with concepts and ability to explain them

Focus Mathematical Concepts

Districts should consider listing prerequisites skills. Concepts that include a focus on relationships and representation might be listed as grade level appropriate.
Prerequisite skills: describe attributes of objects, compare two objects, classify and count objects, identify and describe shapes (two-dimensional and three-dimensional)

Common Misconceptions: Children may confuse shortest and longest, may draw longest to shortest or shortest to longest lines out of order, may have difficulty determining the closest color tile, may leave space between color tiles, may miscount the number of paper clips, may not align the measuring tool with the end of the object, may misread word problems, may write the zeros in the wrong place when writing time, may write the incorrect hour when writing time to the half hour, may confuse the hour hand with the minute hand, may write time on a digital clock incorrectly, may confuse more and fewer when comparing numbers, may have difficulty finding the value for a given bar in a bar graph, may color the wrong number of cells for a bar on a bar graph, may miscount the pictures in a picture graph, may not understand how to read a bar graph, may forget to count the diagonal line in a group of 5 tally marks, may add when finding how many more are in in one group than in another, may misinterpret information in a word problem and draw bars

incorrectly on a bar graph, may not understand the use of only as they classify shapes based on whether their surfaces are curved and/or flat, may misidentify shapes, may not understand that a cube is a special kind of rectangular prism, may not understand the term *both*, may confuse a cylinder with a cone, may not correctly combine composite shapes, may misidentify a turned square as a triangle, may be unable to visualize how to combine smaller blocks into a larger shape, may miscount number of sides and vertices on a shape, may have difficulty recognizing shapes in a different orientation, may not distinguish equal and unequal parts,

Number Fluency (for grades K-5):

Grade	Required Fluencies
K	Fluently add/subtract within 5
1	Add/Subtract within 20, demonstrating fluency for addition and subtraction within 10

District/School Tasks	**District/School Primary and Supplementary Resources**
Exemplar tasks or illustrative models could be provided. • iReady program to assess and practice math skills • Go Math lessons (Chapters 9-12) • Animated Math Models Skills 39-51 (concepts related to measurement, time, graphing, and geometry) • *Measure Up!* game to introduce measurement • Vocabulary Game *Going Places with Go Math Words!* to introduce words associated with time • Reading activities for The Dog Show to practice measuring length with nonstandard units • Reading activities for Treasure Hunts to read about using nonstandard measurement units to make treasure maps • Reading activities for Time to Play to practice reading clocks • Grab and Go activity card *On the Hour*: Blue #17 (model time to the hour on an analog clock) • Grab and Go activity card *Half Past*: Orange #17 (model time to the hour and half hour on analog clock) • *Story Time* game to practice showing time on digital and analog clocks • Reading activities for Miss B's Class Makes Tables and Graphs to learn how to gather and compare data by making tally tables and graphs • Grab and Go activity card *Graph Math*: Blue #6 (making a real-object graph) • Grab and Go activity card *Picture Perfect*: Purple #6 (making a picture graph)	*District/school resources and supplementary resources that are texts as well as digital resources used to support the instruction.* • Teacher and student editions for Go Math • Go Math Animated Math Models • Go Math *Personal Math Trainer* Activities • Go Math *Math on the Spot* videos • Go Math *iTools* • Reteach teacher resource for intervention • Enrich teacher resource for enrichment • Go Math student workbooks • Go Math work mats • Grab and Go Center Kit resources • Decodable books, Math Concept Readers • Think Central tools for school and home/iTools • Manipulatives (counters, connecting cubes, mini clocks, 2-D & 3-D shapes) • Hundreds chart • Touch Math resources • iPad math apps: Math Bingo, By ABCya Successfully Learning Mathematics, Grade 1 Barnyard Math Challenge Math Challenge 1 Grade 1 Math

- Grab and Go activity card *Pass the Bar*: Blue #8 (making a bar graph)
- Grab and Go activity card *Tally Ho!*: Orange #6 (making a tally chart)
- *Graph Game* to practice making and reading bar graphs
- Grab and Go activity card *On the Corner*: Blue #10 (show the number of sides and corners for various shapes)
- Reading activities for April's First Word to practice identifying three-dimensional shapes
- Grab and Go activity card *Building Blocks*: Purple #10 (combining two-dimensional shapes to create new shapes)
- Reading activities for Building a Mini-Park to learn about three-dimensional shapes
- *On the Water* game to practice describing the attributes of two-dimensional shapes
- Reading activities for Signs Shape Up to identify the shapes of signs
- Grab and Go activity card *More Alike Than Not*: Orange #10 (sorting shapes by number of sides)
- Grab and Go activity card *Half Math*: Blue #19 (dividing two-dimensional shapes into two equal parts)

Math GO
Math Bumpies
Splash Math

- ABCya.com
- Math Chimp
- Internet4Classrooms Interactive Math Skill Builders
- YouTube videos/songs:
  -The Time Song
  -Telling Time-Basics of the Clock
  -Telling Time for Children-Learning the Clock
  -Telling Time to the Half Hour
  -The Shapes Song

Instructional Best Practices and Exemplars

This is a place to capture examples of standards integration and instructional best practices.

- Provide opportunities for students to use objects and counters to add and subtract
- Allow students to create and act out addition and subtraction word problems
- Differentiate students based on their completion of formative assessment
- Encourage students to take on an active role in group work during the differentiated activities
- Allow students to learn collaboration while working with members in their math groups
- Have students connect mathematics through literature and informational text
- Model and teach students to use verbal and writing skills and reasoning to explain how they arrived at an answer
- Utilize 21st century skills through daily usage of various technology (computers, Smartboard, iPads)
- Practice test taking strategies during small group instruction
- Use of daily routines such as Problem of the Day and Number of the Day
- Make a class story problem book
- Play addition and subtraction fact board games
- Use flash cards for basic fact practice
- Use playing cards to play addition and subtraction games
- Read or write time, graphing, and geometry books
- Have students maintain a daily math journal for problem solving
- Create anchor charts with students as new concepts, skills, and strategies are introduced, display anchor charts around the classroom for future reference
- Look for opportunities to appeal to multiple intelligences
- Provide opportunities for students to use objects (manipulatives) as they add, subtract, and solve problems

- Allow students to use mini clocks to model time to the half hour and hour (Play a game in which the teacher says to show a certain time and the students have to hold up their clocks with the correct time)
- Provide students the opportunity to create their own flower clocks
- Have students tally data and create their own picture graphs, bar graphs, and tally tables
- Model and act out word problems to practice the meanings of the words *more* and *fewer*
- Allow students to explore two-dimensional and three-dimensional shapes using manipulatives and have students describe them using newly learned vocabulary
- Use information gained from formative assessments to plan appropriate, meaningful instruction that will target your students' weaknesses
- Provide your students with meaningful, differentiated assignments and station activities to work on cooperatively while you meet with small groups

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