Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 2 Place Value Strategies for Addition and Subtraction	 2.OA.A.1* 2.OA.B.2* 2.OA.C.3 2.OA.C.4 2.G.A.2 2.NBT.B.5* 2.NBT.B.6 2.NBT.B.7 2.NBT.B.9 2.NBT.A.2* 	 Represent and solve problems involving addition and subtraction Add and subtract within 20 Work with equal groups of objects to gain foundations for multiplication Reason with shapes and their attribute Use place value understanding and properties of operations to add and subtract Understand place value 	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.
Unit 2: Suggested Open Educational Resources	2.OA.B.2 Hitting the Target Number 2.OA.C.3 Red and Blue Tiles 2.OA.C.4 Counting Dots in Arrays		MP.5 Use appropriate tools strategically. Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.

Major Supporting Additional (Identified by PARCC Model Content Frameworks).

	Curriculum Unit 2 Standards		Pacing	
Curriculum Unit 2			Unit Days	
	2.OA.A.1* Add and subtract within 100 to solve 1- and 2-step word problems with unknowns in any position.	7		
	• 2.OA.B.2* Fluently add and subtract within 10 using mental strategies.	2		
	• 2.OA.C.3 Write an equation to express an even number as a sum of two equal addends.	3		
Unit 2	• 2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	3		
Place Value	• 2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number.	2		
Strategies for Addition and	• 2.NBT.B.5* Use a variety of strategies (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract within 50.	6	45	
Subtraction	• 2.NBT.B.6 Add up to four two -digit numbers using strategies based on place value and properties of operations.	4		
	• 2.NBT.B.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.	10		
	After applying addition and subtraction strategies based on place value and the properties of operations, explain why these strategies work using drawings or objects [for example, 37 + 12 equals 30 + 7 + 10 + 2 (place value) which equals 30 + 10 + 7 + 2 (property of operations)].	3		
	2.NBT.A.2* Count within 1000 by ones, fives, tens, and hundreds beginning at any multiple of 1, 5, 10, or 100 (e.g. begin at 505 and skip count by 5 up to 605, or begin at 600 and skip count by 100 up to 1000).	2		
	Assessment, Re-teach and Extension	3		

Unit 2 Grade 2			
Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills	
• 2.OA.A.1. Use addition and subtraction within 100 to solve one-and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. *(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): No new concept(s) introduced Students are able to:	
 2.OA.B.2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.*(benchmarked) 2.OA.C.3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends 	MP 2 Reason abstractly and quantitatively. MP.8 Look for and express regularity in repeated reasoning. MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. 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: • add within 10 using mental strategies with accuracy and efficiency. • subtract within 10 using mental strategies with accuracy and efficiency. Learning Goal 2: Fluently add and subtract within 10 using mental strategies. Concept(s): • Even: groups having even numbers of objects will pair up evenly. • Odd: groups having odd numbers of objects will not pair up evenly. Students are able to: • pair up to 20 object, count by 2s and determine whether the group contains an even or odd number of objects. • write an equation to express an even number as a sum of two equal addends. Learning Goal 3: Write an equation to express an even number as a sum of two equal addends.	

		Offit 2	
•	2.OA.C.4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends	MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): Arrays as arrangements of objects. Students are able to: with objects arranged in an array, use repeated addition to find the total. with objects arranged in an array, write an equation to express repeated addition. Learning Goal 4: Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
•	2.G.A.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	MP 2 Reason abstractly and quantitatively. 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: • partition a rectangle into rows and columns of same-size squares and count to find the total number. Learning Goal 5: Partition a rectangle into rows and columns of same-size squares and count to find the total number.
•	2.NBT.B.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. *(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): No new concept(s) introduced Students are able to: • with accuracy and efficiency, add and subtract within 50 using strategies based on place value. • with accuracy and efficiency, add and subtract within 50 using strategies based on properties of operations. • with accuracy and efficiency, add and subtract within 50 using strategies based on the relationship between addition and subtraction.
•	2.NBT.B.6. Add up to four two-digit numbers using strategies based on place value and properties of operations.	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): No new concept(s) introduced Students are able to: • add three two digit numbers using place value strategies and properties of operations. • add four two digit numbers using place value strategies and properties of operations. Learning Goal 7: Add up to four two -digit numbers using strategies based on place value and properties of operations. Learning Goal 6: Use a variety of strategies (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract within 50.

Offic 2			
 2.NBT.B.7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. 2.NBT.B.9. Explain why addition and subtraction strategies work, using 	MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning. MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the	 Concept(s): In adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones. Sometimes it is necessary to compose or decompose tens or hundreds. Students are able to: add and subtract within 1000, using concrete models or drawings. add and subtract within 1000 using strategies based on place value. add and subtract within 1000 using properties of operations or the relationship between addition and subtraction. relate the strategies to a written method. Learning Goal 8: Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Concept(s): No new concept(s) introduced Students are able to:	
place value and the properties of operations.	reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	 Explain, using objects and drawings, why addition and subtraction strategies based on place value work. Explain, using objects and drawings, why addition and subtraction strategies based on properties of operations work. Learning Goal 9: After applying addition and subtraction strategies based on place value and the properties of operations, explain why these strategies work using drawings or objects [for example, 37 + 12 equals 30 + 7 + 10 + 2 (place value) which equals 30 + 10 + 7 + 2 (property of operations)]. 	
• 2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s. *(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): No new concept(s) introduced Students are able to: • count within 1000 by ones. • count within 1000 by fives, tens, and hundreds beginning at any multiple of 5, 10, or 100. Learning Goal 10: Count within 1000 by ones, fives, tens, and hundreds beginning at any multiple of 1, 5, 10, or 100 (e.g. begin at 505 and skip count by 5 up to 605, or begin at 600 and skip count by 100 up to 1000).	

Unit 2 Grade 2		
School/District Formative Assessment Plan	School/District Summative Assessment Plan	
Pre-Assessment, Quizzes	Link It	
Exit Tickets	Chapter Assessments	
Daily Monitoring	Go Math Performance Assessment Task	
Interactive Notebook		
Math Portfolio		
Go Math Mid Chapter Checkpoint		
Go Math Show What You Know		
Go Math Quick Checks		

Focus Mathematical Concepts

Prerequisite skills:

Achieve the Core Coherence Map

https://achievethecore.org/coherence-map/

Standards:

2.OA.A.1 1.OA.1 **2.OA.B.2** 1.OA.6 **2.OA.C.3** 1.OA.5

2.OA.C.4

2.G.A.2 1.G.3 **2.NBT.B.5** 1.NBT.4 **2.NBT.B.6** 1.NBT.4

2.NBT.B.7 1.NBT.4 **2.NBT.B.9** 1.NBT.6

2.NBT.A.2 1.OA.5

Common Misconceptions:

2.OA.A.1 Some students end their solution to a two-step problem after they complete the first step. They may have misunderstood the question or only focused on finding the first part of the problem. Students need to check their work to see if their answer makes sense in terms of the problem situation. They need many opportunities to solve a variety of two-step problems and develop the habit of reviewing their solution after they think they have finished. Many children have misconceptions about the equal sign. Students can misunderstand the use of the equal sign even if they have proficient computational skills. The equal sign means, "is the same as" however, many primary students think that the equal sign tells you that the "answer is coming up." Students need to see examples of number sentences with an operation to the right of the equal sign and the answer on the left, so they do not over-generalize from those limited examples. They might also be predisposed to think of equality in terms of calculating answers rather than as a relation because it is easier for young children to carry out steps to find an answer than to identify relationships among quantities. Students might rely on a key word or phrase in a problem to suggest an operation that will lead to an incorrect solution. They might think that the word *left* always means that subtraction must be used to find a solution. Students need to solve problems where keywords are contrary to such thinking.

2.OA.C.3 Students will look at the number of digits to determine if the number is odd or even instead of the quantity itself. Example: 53 is an even number because it has 2 digits. This is a misconception. Students will determine whether a number is odd or even by the first digit in the number instead of the digit in the ones place.

2.NBT.B.5 - 2.NBT.B.9 Students may think that the 4 in 46 represents 4, not 40 or 4 tens. Students need many experiences representing two-and three-digit numbers with manipulatives that group (base ten blocks) and those that do NOT group, such as counters, etc.

When adding two-digit numbers, some students might start with the digits in the ones place and record the entire sum. Then they add the digits in the tens place and record this sum. Assess students' understanding of *a ten* and provide more experiences modeling addition with grouped and pre-grouped base-ten materials as mentioned above.

When subtracting two-digit numbers, students might start with the digits in the ones place and subtract the smaller digit from the greater digit. Then they move to the tens and the hundreds places and subtract the smaller digits from the greater digits. Assess students' understanding of *a ten* and provide more experiences modeling subtraction with grouped and pre-grouped base-ten materials.

Number Fluency:

2.0A.A.1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

2.OA.B.2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s.

2.NBT.B.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Achieve the Core – GoMath Fluency Activities

https://achievethecore.org/page/2853/go-math-k-5-guidance-documents

Achieve the Core – Fluency Activities

https://achievethecore.org/page/2948/fluency-resources-for-grade-level-routines

Math Coach – Fact Fluency http://schoolwires.henry.k12.ga.us/Page/21865

Math Wire – Basic Facts Link http://mathwire.com/numbersense/bfactslinks.html

 ${\color{blue} Math\ Fact\ Practice\ \underline{http://www.playkidsgames.com/games/mathfact/mathFact.htm}}$

District/School Tasks	District/School Primary and Supplementary Resources
Examples of CCSS Items - Delaware Comparison Document	Text – Go Math
Delaware DOE Common Core Item Bank for Mathematics – Grade 2	V 4 G 4 D 4 ATT VVIII
http://www.doe.k12.de.us/cms/lib09/DE01922744/Centricity/Domain/111/Math_G	North Carolina Dept of Ed. Wikispaces:
rade_2-Nov.pdf	http://maccss.ncdpi.wikispaces.net/Elementary
	Flip Book
	http://community.ksde.org/Default.aspx?tabid=5646
	101 Math Discourse Questions:
	http://www.casamples.com/downloads/100MathDiscourseQuestions Printable.pdf
	Asking Effective Questions http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS AskingEffectiveQu
	estions.pdf
	Think Central
	https://www-
	<u>k6.thinkcentral.com/ePC/viewResources.do?method=retrieveResources&pageName=reso</u>
	<u>urcepage</u>
	Xtra Math
	https://xtramath.org/#/home/index
	Prodigy
	https://www.prodigygame.com/Play/
Instructional Best Practices and Exemplars	
1. Identifying similarities and differences	6. Cooperative learning
2. Summarizing and note taking	7. Setting objectives and providing feedback
3. Reinforcing effort and providing recognition	8. Generating and testing hypotheses
4. Homework and practice	9. Cues, questions, and advance organizers
5. Nonlinguistic representations	10. Manage response rates

Vocabulary

2.OA.A.1

Represent and solve problems involving addition and subtraction.

add, subtract, more, less, equal, equation, putting together, taking from, taking apart, addend, comparing, unknown

2.OA.B.2

Add and subtract within 20.

add, subtract, sum, more, less, equal, equation, putting together, taking from, taking apart, addend

2.OA.C.3 & 4

Work with equal groups of objects to gain foundations for multiplication.

odd, even, row, column, rectangular array, equal, addend, equation, sum

2.G.A.2

Reason with shapes and their attributes.

partition, equal size, equal shares, half, halves, thirds, half of, a third of, whole, two halves, three thirds, four fourths, rows, columns

2.NBT.B.5, 6, 7 & 9

Use place value understanding and properties of operations to add and subtract.

fluent, compose, decompose, place value, digit, ten more, ten less, one hundred more, one hundred less, add, subtract, sum, equal, addition, subtraction, regroup 2.NBT.A.2

Understand place value.

hundreds, tens, ones, skip count, base-ten, *number names to 1,000* (e.g., one, two, thirty, etc.)

9.1 Personal Financial Literacy, 9.2 Career Awareness, Exploration, and Preparation and Training, 9.4 Life Literacies and Key Skills

- 9.1.2.RM.1 Describe how valuable items might be damaged or lost and ways to protect them.
- 9.4.2.CT.2 Identify possible approaches and resources to execute a plan
- 9.4.2.CT.3 Use a variety of types of thinking to solve problems (e.g., inductive, deductive)

The implementation of the 21st Century skills and standards for students of the Winslow Township District is infused in an interdisciplinary format in a variety of curriculum areas that include, English language Arts, Mathematics, School Guidance, Social Studies, Technology, Visual and Performing Arts, Science, Physical Education and Health, and World Language.: Additional opportunities to address 9.1, 9.2 & 9.4:

Philadelphia Mint

https://www.usmint.gov/learn/kids/resources/educational-standards

Different ways to teach Financial Literacy.

https://www.makeuseof.com/tag/10-interactive-financial-websites-teach-kids-money-management-skills/

Suggested Modifications for Special Education/504			
Students with special needs: The students' needs will be addressed on an individual and grade level using a variety of modalities. Accommodations will be made for those students who need extra time to complete assignment. Support staff will be available to aid students related to IEP specifications. 504 accommodations will also be attended to by all instructional leaders. Physical expectations and modifications, alternative assessments, and scaffolding strategies will be used to support this learning. The use of Universal Design for Learning (UDL) will be considered for			
all students as teaching strategies are considered.			
☐ Provide the opportunity to re-take tests ☐ Individual Intervention/Remediation ☐ Modify activities/assignments/projects/assessments ☐ Additional Support Materials ☐ Breakdown activities/assignments/projects/assessments into manageable units ☐ Guided Notes ☐ Additional time to complete activities/assignments/projects/assessments ☐ Graphic Organizers ☐ Provide an option for alternative activities/assignments/projects/assessments ☐ Adjust Pacing of Content ☐ Modify Content ☐ Increase one on one time ☐ Modify Amount ☐ Peer Support ☐ Small Group Intervention/Remediation ☐ Other Modifications for Special Education:			
Suggested Modification	ns for At-Risk Students		
Formative and summative data will be used to monitor student success. At first signs of failure, student work will be reviewed to determine support. This may include parent consultation, basic skills review and differentiation strategies. With considerations to UDL, time may be a factor in overcoming developmental considerations			
Provide the opportunity to re-take tests	☐ Modify Content		
☐ Increase one on one time	☐ Modify Amount		
□ Oral prompts can be given□ Using visual demonstrations, illustrations, and models	☐ Adjust Pacing of Content☐ Small Group Intervention/Remediation		
☐ Give directions/instructions verbally and in simple written format	☐ Individual Intervention/Remediation		
□ Peer Support	☐ Additional Support Materials		
☐ Modify activities/assignments/projects/assessments			
	☐ Guided Notes		
☐ Additional time to complete activities/assignments/projects/assessments ☐ Provide an option for alternative activities/assignments/projects/assessments	☐ Graphic Organizers ☐ Other Modifications for Students At-Risk:		

English Language Learners	Suggested Modifications for Gifted Students
All WIDA Can Do Descriptors can be found at this link: https://wida.wisc.edu/teach/can-do/descriptors Grades 2-3 WIDA Can Do Descriptors: Listening Speaking Reading Writing Oral Language Students will be provided with accommodations and modifications that may include: Relate to and identify commonalities in mathematics studies in student's home country Assist with organization Use of computer Emphasize/highlight key concepts Teacher Modeling Peer Modeling Label Classroom Materials - Word Walls	Students excelling in mastery of standards will be challenged with complex, high level challenges related to the topic. Raise levels of intellectual demands Require higher order thinking, communication, and leadership skills Differentiate content, process, or product according to student's readiness, interests, and/or learning styles Provide higher level texts Expand use of open-ended, abstract questions Critical and creative thinking activities that provide an emphasis on research and in-depth study Enrichment Activities/Project-Based Learning/ Independent Study Additional Strategies may be located at the links: Gifted Programming Standards Webb's Depth of Knowledge Levels and/or Revised Bloom's Taxonomy REVISED Bloom's Taxonomy Action Verbs
Suggest	ed Activities
□ Do Now/Warm-Up □ Whole Group □ Small Groups □ Guided Practice □ Independent Practice □ Daily 5 □ CAFÉ	☐ Centers ☐ Intervention/Remediation ☐ Projects ☐ Academic Games ☐ Other Suggested Activities:

Interdisciplinary Connections

Go Math Big Idea Vocabulary Reader: All About Animals (Math, Reading, Writing, Science)

Go Math Real World Project: My Math Project Storybook "A Bunch of Animals" (Science)

Go Math ThinkCentral STEM Activities (Science)

Go Math Cross-Curricular Science and Social Studies questions, experiments, and activities embedded throughout the chapter

Integration of Computer Science and Design Thinking

- 8.2.2.ITH.3 Identify how technology impacts or improves life.
- 8.2.2.ITH.4 Identify how various tools reduce work and improve daily tasks.
- 8.1.2.NI.1 Model and describe how individuals use computers to connect to other individuals, places, information, and ideas through a network.
- 8.1.2.NI.2 Describe how the internet enables individuals to connect with others worldwide.
- 8.1.2.CS.3 Describe basic hardware and software problems using accurate terminology.