Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

Overview	Standards for Mathematical Content	Unit Focus		Standards for Mathematical Practice
Unit 3 **Measurement**	● 2.MD.A.1 ● 2.MD.A.3 ● 2.MD.A.2 ● 2.MD.A.4 ● 2.MD.B.5 ● 2.MD.B.6 ● 2.MD.C.7 ● 2.NBT.A.2* ● 2.NBT.B.5*	● Measure and estimate lengths in standard units ● Relate addition and subtraction to length ● Work with time ● Understand place value ● Use place value understanding and properties of operations to add and subtract		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.
Unit 3: *Suggested Open Educational Resources*	2.MD.A.1,3,4 Determining Length 2.MD.B.5 High Jump Competition 2.MD.B.6 Frog and Toad on the Number Line 2.MD.C.7 Ordering Time			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.

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

Curriculum Unit 3	Standards		Pacing	
			Days	Unit Days
Unit 3 **Measurement**	● 2.MD.A.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	4	45
	● 2.MD.A.3	Estimate lengths of objects and measure lengths of objects using appropriate tools.	5	
	● 2.MD.A.2	Compare measurements of an object taken with two different units of measure and describe how the two measurements relate to the size of the unit chosen.	5	
	● 2.MD.A.4	Compare lengths of two objects and determine how much longer one object is than the other using a standard unit of measure.	4	
	● 2.MD.B.5	Add and subtract within 100 to solve word problems involving lengths using a symbol to represent the unknown number.	4	
	● 2.MD.B.6	Use a number line to represent the solution of whole number sums and differences related to length within 100.	4	
	● 2.MD.C.7	Tell and write time using analog and digital clocks to the nearest five minutes using a.m. and p.m.	4	
	● 2.NBT.A.2*	Orally count within 1000 including skip-counting by 5s, 10s, and 100s	3	
	● 2.NBT.B.5*	Select and use a strategy (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract within 100.	8	
	Assessment, Re-teach and Extension		4	

Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

Unit 3 Grade 2		
Content Standards	**Suggested Standards for Mathematical Practice**	**Critical Knowledge & Skills**
● 2.MD.A.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	MP.5 Use appropriate tools strategically. 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: ● measure lengths of objects using rules, yardsticks, meter sticks and measuring tapes. Leaning Goal 1: Estimate lengths of objects and measure lengths of objects using appropriate tools.
● 2.MD.A.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. 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: ● measure the length of an object using different units of measure. ● compare the measurements and explain how they relate to each unit. Learning Goal 2: Compare measurements of an object taken with two different units of measure and describe how the two measurements relate to the size of the unit chosen.
● 2.MD.A.3. Estimate lengths using units of inches, feet, centimeters, and meters	MP.5 Use appropriate tools strategically. 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: ● estimate lengths of objects. Leaning Goal 1: Estimate lengths of objects and measure lengths of objects using appropriate tools.
● 2.MD.A.4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): No new concept(s) introduced Students are able to: ● Measure objects, comparing to determine how much longer one object is than another. ● Express the difference in length in terms of a standard unit of measure. Learning Goal 3: Compare lengths of two objects and determine how much longer one object is than the other using a standard unit of measure.

● 2.MD.B.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem *example, if Angela needs 30 feet of ribbon for gifts, but she only has 17 feet, number sentences 17 + □ = 30 and 30 - □ = 17 both represent the situation and □ represents the number of feet of ribbon that she still needs.*	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.	Concept(s): No new concept(s) introduced Students are able to: ● add and subtract, within 100, to solve word problems involving lengths (lengths are given in the same units). ● use drawings to represent the problem. ● use number sentences with a symbol for the unknown to represent the problem. Learning Goal 4: Add and subtract within 100 to solve word problems involving lengths using a symbol to represent the unknown number.
● 2.MD.B.6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	MP.4 Model with mathematics. MP 2 Reason abstractly and quantitatively. MP.5 Use appropriate tools strategically.	Concept(s): No new concept(s) introduced Students are able to: ● use equally spaced points of a number line to represent whole numbers as lengths from 0. ● represent whole number sums within 100 on a number line diagram. ● represent whole number differences within 100 on a number line diagram. Learning Goal 5: Use a number line to represent the solution of whole number sums and differences related to length within 100.
● 2.MD.C.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): No new concept(s) introduced Students are able to: ● use analog and digital clocks, tell time to the nearest five minutes using a.m. and p.m. ● use analog and digital clocks, write time to the nearest five minutes using a.m. and p.m. Learning Goal 6: Tell and write time using analog and digital clocks to the nearest five minutes using a.m. and p.m.

Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

• 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 7: Orally count within 1000 including skip-counting 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. *(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): • Place value • Relationship between addition and subtraction • Properties of Operations Students are able to: • add and subtract within 100 using place value strategies. • add and subtract within 100 using properties of operations and the relationship between addition and subtraction. Learning Goal 8: Select and use a strategy (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract within 100.

Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

Unit 3 Grade 2	
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
Pre-Assessment, Quizzes Exit Tickets Daily Monitoring Interactive Notebook Math Portfolio Go Math Mid Chapter Checkpoint Go Math Show What You Know Go Math Quick Checks	Link It Chapter Assessments Go Math Performance Assessment Task

Focus Mathematical Concepts
Prerequisite skills: **Achieve the Core Coherence Map** **https://achievethecore.org/coherence-map/** Standards: **2.MD.A.1:**   1.MD.2 **2.MD.A.3:**   1.MD.2 **2.MD.A.2:**   1.MD.2 **2.MD.A.4:**   1.MD.1 **2.MD.B.5:**   2.MD.4 **2.MD.B.6:** **2.MD.C.7:**   1.MD.3 **2.NBT.A.2:**   1.NBT.2 **2.NBT.B.5:**   1.NBT.4

<u>Common Misconceptions:</u>

2.MD.1-2.MD.4 When some students see standard rulers with numbers on the markings. they believe that the numbers are counting marks instead of units or spaces between the marks. Have students use informal or standard length units to make their own rulers by marking each whole unit with a number in the middle. They will see that the ruler is a representation of a row of units and focus on the spaces. Some students might think that they can only measure lengths with a ruler starting at the left edge. Provide situations where the ruler does not start at zero. For example, a ruler is broken and the first inch number that can be seen is 2. If a pencil is measured and it is 9 inches on this ruler, the students must subtract 2 inches from the 9 inches to adjust for where the measurement started. Some students become confused when the ruler they are using have both customary and metric measurements on it. By covering one scale with masking tape, the student becomes less confused.

2.MD.5-2.MD.6 Students may think they always have to start at zero. Adjustments can be made if measured from a different starting location than zero.Help students develop an understanding of what the problem is asking. Often "key words" can be misleading and usually will only help with one step of the problem. This is a limitation when working with multi-step word problems. The teaching of a "key word approach" limits the development of understanding what the problems is actually asking.

2.MD.7 Some students might confuse the hour and minutes hands. For the time of 3:45, they say the time is 9:15. Also, some students name the numeral closest to the hands, regardless of whether this is appropriate. For instance, for the time of 3:45 they say the time is 3:09 or 9:03.

2.NBT. 2 Some students may not move beyond thinking of the number 358 as 300 ones plus 50 ones plus 8 ones to the concept of 8 singles, 5 bundles of 10 singles or tens, and 3 bundles of 10 tens or hundreds. Use base-ten blocks to model the collecting of 10 ones (singles) to make a ten (a rod) or 10 tens to make a hundred (a flat). It is important that students connect a group of 10 ones with the word ten and a group of 10 tens with the word hundred.

2.NBT.5 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.

<u>Number Fluency:</u>

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.

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
Math Fact Practice http://www.playkidsgames.com/games/mathfact/mathFact.htm

Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

District/School Tasks	District/School Primary and Supplementary Resources
Examples of CCSS Items - Delaware Comparison Document **Delaware DOE Common Core Item Bank for Mathematics – Grade 2** **http://www.doe.k12.de.us/cms/lib09/DE01922744/Centricity/Domain/111/Math_Grade_2-Nov.pdf**	Text – Go Math **North Carolina Dept of Ed. Wikispaces:** 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_AskingEffectiveQuestions.pdf **Think Central** https://www-k6.thinkcentral.com/ePC/viewResources.do?method=retrieveResources&pageName=resourcepage **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

Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

Vocabulary

2.MD.A.1,2,3, & 4
Measure and estimate lengths in standard units.
about, a little less than, a little more than, longer, shorter, measure, standards units, units, customary, metric, inch, foot, centimeter, tools, ruler, meter, centimeter, ruler, yardstick, meter stick, measuring tape, estimate, sums, differences

2.MD.B.5 & 6
Relate addition and subtraction to length.
inch, foot, yard, centimeter, meter, ruler, yardstick, meter stick, measuring tape, estimate, length, equation, number line, equally spaced, point, addition, subtraction, unknown, sums, differences, measure, standard units, customary, metric, units, sums, differences

2.MD.C.7
Work with time and money.
time, hour hand, minute hand, hour, minute, a.m., p.m., o'clock, *multiples of 5* (e.g., five, ten, fifteen, etc.), analog clock, digital clock, quarter 'til, quarter after, half past, quarter hour, half hour, thirty minutes before, 30 minutes after, 30 minutes until, 30 minutes past

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.), expanded form, greater than (>), less than (<), equal to (=), digit, compare

2.NBT.B.5
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

Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

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

9.1.2.FP.1 Explain how emotions influence whether a person spends or saves
9.1.2.FP.2 Differentiate between financial needs and wants
9.1.2.PB.1 Determine various ways to save and places in the local community that help people save and accumulate money over time
9.1.2.PB.2 Explain why an individual would chose to save money

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
☐ Modify activities/assignments/projects/assessments
☐ Breakdown activities/assignments/projects/assessments into manageable units
☐ Additional time to complete activities/assignments/projects/assessments
☐ Provide an option for alternative activities/assignments/projects/assessments
☐ Modify Content
☐ Modify Amount
☐ Small Group Intervention/Remediation

☐ Individual Intervention/Remediation
☐ Additional Support Materials
☐ Guided Notes
☐ Graphic Organizers
☐ Adjust Pacing of Content
☐ Increase one on one time
☐ Peer Support
☐ Other Modifications for Special Education:

Winslow Schools
Mathematics Curriculum - Grade 2
Unit 3

Suggested Modifications 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
☐ Increase one on one time
☐ Oral prompts can be given
☐ Using visual demonstrations, illustrations, and models
☐ Give directions/instructions verbally and in simple written format
☐ Peer Support
☐ Modify activities/assignments/projects/assessments
☐ Additional time to complete activities/assignments/projects/assessments
☐ Provide an option for alternative activities/assignments/projects/assessments

☐ Modify Content
☐ Modify Amount
☐ Adjust Pacing of Content
☐ Small Group Intervention/Remediation
☐ Individual Intervention/Remediation
☐ Additional Support Materials
☐ Guided Notes
☐ 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

Suggested Activities	
☐ Do Now/Warm-Up	☐ CAFÉ
☐ Whole Group	☐ Centers
☐ Small Groups	☐ Intervention/Remediation
☐ Guided Practice	☐ Projects
☐ Independent Practice	☐ Academic Games
☐ Daily 5	☐ Other Suggested Activities:

Interdisciplinary Connections
Go Math Big Idea Vocabulary Reader: Making a Kite (Math, Reading, Writing, Science)
Go Math Real World Project: My Math Project Storybook "Flying a Kite" (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.