## Winslow Schools Mathematics Curriculum – Kindergarten Unit 2

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 2	• K.CC.A.1*	• Know number names and the count sequence to 50	MP.1 Make sense of problems and persevere in
Counting, Addition	• K.CC.A.2	<ul> <li>Understand addition as putting together and adding to understand subtraction as taking apart and taking from</li> </ul>	solving them.
& Subtraction	<ul><li>K.CC.A.3*</li><li>K.OA.A.1*</li></ul>	Count to tell the number of objects	MP.2 Reason abstractly and quantitatively.
	• K.OA.A.1	• Compare numbers	
	• K.CC.B.5*		MP.3 Construct viable arguments and critique the
	• K.CC.C.6		reasoning of others.
	• K.CC.C.7		MP.4 Model with mathematics.
	• K.OA.A.5*		
Unit 2:	K.CC.A.1 Choral Counting	<u> </u>	MP.5 Use appropriate tools strategically.
Suggested Open	K.CC.A.2 Start-Stop Counting		MP.6 Attend to precision.
Educational	K.CC.A.3 Assessing Writing Numbers K.OA.A.2 Dice Addition 2 K.OA.A.2 What's Missing? K.CC.B.5 Finding Equal Groups K.CC.C.6 Which number is greater? Which number is less? How do you know? K.CC.C.7 Guess the Marbles in the Bag K.OA.A.5 Many Ways to Do Addition 1		The state of the s
Resources			MP.7 Look for and make use of structure.
			MD 0 I al Caralla anno 1 d'alla anno 1
			<b>MP.8</b> Look for and express regularity in repeated reasoning.
			reasoning.

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

# Winslow Schools Mathematics Curriculum – Kindergarten Unit 2

	it Standards		Pacing	
Curriculum Unit			Unit Days	
	Count to 50 by ones and by tens.			
	● K.CC.A.1*  Represent a number of objects with a written numeral <u>0 to 20.</u>	3		
	• K.CC.A.2 Count forward <u>up to 50</u> starting from numbers other than one.	2		
	• K.CC.A.3* Represent a number of objects with a written numeral <u>0 to 20.</u>	3		
Unit 2	Create addition and subtraction events with objects, fingers, drawings, sounds (e.g., claps), acting out situations and verbal explanations ( <u>up to 10</u> ).	6	45	
Counting, Addition &	• K.OA.A.2 Use objects or drawings to represent and solve addition and subtraction word problems (within 10).	5		
Subtraction	• K.CC.B.5* Answer how many? questions about groups of up to 20 objects when arranged in a line, rectangular array or circle.	4		
	Answer <i>how many?</i> questions about groups of <u>up to 10</u> when arranged in a scattered configuration.			
	• K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (groups of up to 10 objects).	12		
	• K.CC.C.7 Compare numbers (up to 10) written as numerals.	4		
	• K.OA.A.5* Use mental math strategies to solve addition facts within 5.	3		
	Assessment, Re-teach and Extension	3		

## Mathematics Curriculum – Kindergarten

Unit 2 Kindergarten			
Content Standards		Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
•	K.CC.A.1. Count to 100 by ones and by tens.*(benchmarked)	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 50  Students are able to:  count orally by ones up to 50.  count orally by tens up to 50.  Learning Goal 1: Count to 50 by ones and by tens.
•	K.CC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	MP. 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students will be able to:  • count orally by ones up to 50, beginning at any number.  Learning Goal 2: Count forward up to 50 starting from numbers other than one.
•	K.CC.A.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).*(benchmarked)	MP. 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s):  • The number of objects can be represented by a numeral.  Students are able to:  • write numbers from 0 to 20.  Learning Goal 3: Represent a number of objects with a written numeral 0 to 20.
•	K.OA.A.1. Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *(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):  • Understand addition as putting together and adding to.  • Understand subtraction as taking apart and taking from.  Students are able to:  • create subtraction and addition events with objects (up to 10).  • create subtraction and addition events with drawings and sounds (up to 10).  • create subtraction and addition events by acting out situations and with verbal explanations.  Learning Goal 4: Create addition and subtraction events with objects, fingers, drawings, sounds (e.g., claps), acting out situations and verbal explanations (up to 10).
•	K.OA.A.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings 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. MP.5 Use appropriate tools strategically.	Concept(s): No new concept(s) introduced Students will be able to:  • use objects and drawings to represent addition and subtraction.  • add and subtract within 10.  Learning Goal 5: Use objects or drawings to represent and solve addition and subtraction word problems (within 10).

## Mathematics Curriculum – Kindergarten

• K.CC.B.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects. *(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 to tell the number of objects arranged in a line, rectangular array, circle, or scattered configuration.  • count to tell the number of objects when asked "how many?" questions.  • given a number from 1-20, count out that many object.  Learning Goal 6: Answer how many? questions about groups of up to 20 objects when arranged in a line, rectangular array or circle.  Learning Goal 7: Answer how many? questions about groups of up to 10 when arranged in a scattered configuration.
• K.CC.C.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group e.g. by using matching and counting strategies.	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.	<ul> <li>Concept(s): <ul> <li>Different groups can have different numbers of objects.</li> <li>Numbers of objects can be compared using phrases such as greater than, less than and equal to.</li> </ul> </li> <li>Students will be able to: <ul> <li>compare the number of objects (up to 10) in two groups.</li> <li>identify whether the number of objects in one group is greater than, less than, or equal to to the number of objects in another group.</li> </ul> </li> <li>Learning Goal 8: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (groups of up to 10 objects).</li> </ul>
• K.CC.C.7. Compare two numbers between 1 and 10 presented as written numerals.	MP.2 Reason abstractly and quantitatively.	Concept(s):  Number names and the count sequence The next number name in counting is always one greater than the previous number. Count to tell the number of objects. Students will be able to: compare numbers (up to 10) written as numerals. Learning Goal 9: Compare numbers (up to 10) written as numerals.
• K.OA.A.5. Demonstrate fluency for addition and subtraction within 5 (by the end of Kindergarten). *(benchmarked)	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 will be able to:  • add within 5 with accuracy and efficiency.  Learning Goal 10: Use mental math strategies to solve addition facts within 5.

### Mathematics Curriculum – Kindergarten

#### Unit 2

Unit 2 Kindergarten	
School/District Formative Assessment Plan	School/District Summative Assessment Plan
Pre-Assessment, Quizzes	Unit Benchmark
Exit Tickets	MAPS/I-Ready
Daily Monitoring	

#### **Focus Mathematical Concepts**

Prerequisite skills: (Pre-school at about 48 or 60 months)

**Achieve the Core Coherence Map** 

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

#### Standards:

K.CC.A.1	Recite numbers in order to twenty with increasing accuracy.
K.CC.A.2	Recite numbers in order to twenty with increasing accuracy.
K.CC.A.3	Recognize and know the name of some written numerals.
K.OA.A.1	Represent addition and subtraction by manipulating up to 5 objec

cts. K.OA.A.2 Begin to represent simple word problem data in pictures and drawings.

K.CC.B.5 Understand, when counting, that the number name of the last object counted represent the total number of objects in the group (i.e. cardinality) K.CC.C.6 Compare visually (with or without counting) two groups of objects that are obviously equal or non-equal and communicate, "more" or "same". K.CC.C.7 Compare visually (with or without counting) two groups of objects that are obviously equal or non-equal and communicate, "more" or "same

Solve simple addition and subtraction problems nonverbally (and often verbally) with a very small number of objects (sums up to 4 or 5) **K.OA.A.5** 

#### **Preschool Standards**

http://www.nj.gov/education/news/2014/standards/PreschoolMath.pdf

## Mathematics Curriculum – Kindergarten

#### Unit 2

#### **Common Misconceptions:**

Some students might not see zero as a number. Ask students to write 0 and say *zero* to represent the number of items left when all items have been taken away. Avoid using the word *none* to represent this situation. Find instances for which the response would be zero in real-world settings to provide experiences with the concept of zero. As long as children *understand* that correct counting requires one point and one word for each object and are trying to do that, parents and teachers do not need to correct errors all the time. Students may over-generalize the vocabulary in word problems and think that certain words indicate solution strategies that must be used to find an answer. They might think that the word *more* always means to add and the words *take away* or *left* always means to subtract. When students use the words *take away* to refer to subtraction and its symbol, teachers need to repeat students' ideas using the words *minus* or *subtract*. For example, students use addition to solve this Take from/Start Unknown problem: Melisa took the 8 stickers she no longer wanted and gave them to Anna. Now Melisa has 11 stickers *left*. How many stickers did Melisa have to begin with? Note on vocabulary: The term "total" should be used instead of the term "sum". "Sum" sounds the same as "some", but has the opposite meaning. "Some" is used to describe problem situations with one or both addends unknown, so it is better in the earlier grades to use "total" rather than "sum". Formal vocabulary for subtraction ("minuend" and "subtrahend") is not needed in Kindergarten. ("total" and "addend" are sufficient for classroom discussion).

#### **Number Fluency:**

**K.CC.1** Count to 100 by ones and by tens.

**K.CC.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

**K.OA.5** Fluently add and subtract within 5.

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

## **Mathematics Curriculum – Kindergarten**

District/School Tasks	District/School Primary and Supplementary Resources
Examples of CCSS Items - Delaware Comparison Document	Text: Go Math
<u>Delaware Common Core Item Bank for Mathematics – Kindergarten</u>	
http://www.doe.k12.de.us/cms/lib09/DE01922744/Centricity/Domain/111/Math_Grad	Think Central
e K.pdf	https://www-
	<u>k6.thinkcentral.com/ePC/viewResources.do?method=retrieveResources&amp;pageName=resou</u>
	rcepage
	XtraMath
	https://xtramath.org/
	ThinkCentral Personal Math Trainer
	Timik Central T Cromar Matin Trainer
	Vindangantan Elia Daala
	Kindergarten Flip Book: http://community.ksde.org/Default.aspx?tabid=5646
	http://community.ksde.org/Deradic.aspx: tabid=3040
	North Carolina Dept of Ed. Wikispaces:
	http://maccss.ncdpi.wikispaces.net/Elementary
	101 Math Discourse Questions:
	http://www.casamples.com/downloads/100MathDiscourseQuestions_Printable.pdf
	interior www.casampies.com/downloads/1001/tathb/iscourseQuestions_11maote.pdf
	Asking Effective Questions
	http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_AskingEffectiveQu
	<u>estions.pdf</u>
Instructional Rest I	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
5	

### Mathematics Curriculum – Kindergarten

#### Unit 2

## Vocabulary K.CC.1, 2 & 3 K.CC.5 Know number names and the count sequence. Count to tell the number of objects. Introduce written number words zero, one, two...ten (students are not responsible for number, zero, one, two...thirteen, fourteen...nineteen being able to read these words, but they should be introduced) How many? count on Know digits and orally count to one hundred K.OA.1, 2 & 5 K.CC.6 & 7 Understand addition as putting together and adding to, and understand Compare numbers. subtraction as taking apart and taking from. greater than, more, join, putting together, add, adding to, separate, subtract, taking apart, taking from, and less than, fewer same amount as, equal, less than, more than, total equal to, same amount as, compare

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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 to 9.1.2.FI.1 Differentiate the various forms of money and how they are used (e.g., coins, 9.2.2.CAP.1 Make a list of different types of jobs and describe the skills associated with	bills, checks, debit and credit cards)		
	Township District is infused in an interdisciplinary format in a variety of curriculum areas hnology, Visual and Performing Arts, Science, Physical Education and Health, and World		
Additional opportunities to address 9.1, 9.2 & 9.4: <b>Philadelphia Mint</b>			
https://www.usmint.gov/learn/educators/lessons-by-grade			
<b>Different ways to teach Financial Literacy.</b> https://www.makeuseof.com/tag/10-interactive-financial-websites-teach-kids-	monoy management chills/		
Suggested Modifications f			
Students with special needs: The students' needs will be addressed on an individual a			
students with special needs. The students freeds will be addressed of an individual a students who need extra time to complete assignments. Support staff will be available.			
	rnative 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 teach			
☐ Modify activities/assignments/projects/assessments	☐ Individual Intervention/Remediation		
☐ Breakdown activities/assignments/projects/assessments into manageable units	☐ Additional Support Materials		
☐ Additional time to complete activities/assignments/projects/assessments	☐ Guided Notes		
☐ Provide an option for alternative activities/assignments/projects/assessments	☐ Graphic Organizers		
☐ Modify Content	☐ Small Group Intervention/Remediation		
☐ Modify Amount	☐ Other Modifications for Special Education:		
☐ Adjust Pacing of Content			

# Winslow Schools Mathematics Curriculum – Kindergarten Unit 2

Suggested Modificat	ions for At-Risk Students
Formative and summative data will be used to monitor student success. At first include parent consultation, basic skills review and differentiation strategies. W considerations   Modify activities/assignments/projects/assessments	· · · · · · · · · · · · · · · · · · ·
☐ Breakdown activities/assignments/projects/assessments into manageable units	☐ Individual Intervention/Remediation
☐ Additional time to complete activities/assignments/projects/assessments	☐ Additional Support Materials
☐ Provide an option for alternative activities/assignments/projects/assessments	☐ Guided Notes
☐ Modify Content	☐ Graphic Organizers
☐ Modify Amount	☐ Other Modifications for Students At-Risk:
☐ Adjust Pacing of Content	
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 K 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 indepth 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
	1

## Mathematics Curriculum – Kindergarten

Suggested Activities		
□ Do Now/Warm-Up	□ Centers	
☐ Whole Group	☐ Intervention/Remediation	
☐ Small Groups	☐ Projects	
☐ Guided Practice	☐Academic Games	
☐ Independent Practice	☐ Other Suggested Activities:	
☐ Daily 5		
□ CAFÉ		
Interdiscipli	nary Connections	
Go Math Big Idea Vocabulary Reader: Around the Neighborhood (Math, Reading, Writing, Social Studies) Go Math Real World Project: My Neighborhood (Math and Social Studies) 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.		
8.1.2.C.S.3 Describe basic nardware and software problems using accurate terminology.		