Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 1 **Connecting Counting to Cardinality**	• K.CC.A.1* • K.CC.A.3* • K.CC.B.4 • K.CC.B.5* • K.OA.A.1* • K.MD.B.3* • K.G.A.1	• Know number names and the count sequence to 10 • Count to tell the number of objects • Understand addition as putting together and adding to and understand subtraction as taking apart and taking from • Identify and describe shapes	**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**	K.CC.A.1 Counting Circles K.CC.A.1 Choral Counting K.CC.A.3 Number TIC TAC TOE K.CC.B.4 Counting Mat K.CC.B.5 Finding Equal Groups K.OA.A.1 Ten Frame Addition K.MD.B.3 Sort and Count 1		

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

Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

Curriculum Unit	Standards		Pacing	
			Days	Unit Days
Unit 1 **Connecting Counting to Cardinality**	● K.CC.A.1* ● K.CC.A.3*	Count by ones up to 10. Represent the number of objects with a written numeral up to 10. Represent the number of objects with a written numeral up to 10.	14	45
	● K.CC.B.4	Assign an ascending number name for each object in a group. State the last number named as the number of counted objects in the set. Identify the next number name in counting as one greater than the previous number.	8	
	● K.CC.B.5*	Answer *how many?* questions about groups of up to 10 objects when in a line, rectangular array or circle. Answer *how many?* questions about groups of up to 5 when arranged in a scattered configuration.	8	
	● K.OA.A.1*	Create addition events with objects, fingers, drawings, sounds (e.g., claps), acting out situations and verbal explanations for sums up to 10.	5	
	● K.MD.B.3*	Classify objects into given categories and count the objects in each category (up to 10 objects).	3	
	● K.G.A.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.	3	
		Assessment, Re-teach and Extension	4	

Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

Unit 1 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 10 Students are able to: ● count orally by ones up to 10. Learning Goal 1: Count by ones up to 10.
● 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): ● Represent the number of objects with a numeral. Students are able to: ● write numbers from 0 to 10. Learning Goal 2: Represent the number of objects with a written numeral up to 10.
● K.CC.B.4. Understand the relationship between numbers and quantities; connect counting to cardinality. K.CC.B.4a.When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. K.CC.B.4b.Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. K.CC.B.4c.Understand that each successive number name refers to a quantity that is one larger.	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): ● Objects can be counted in any order. Each object is counted once (one-to-one correspondence). ● The next number name in counting is always one greater than the previous number. ● The last number name said tells the number of objects counted. Students are able to: ● say number names in the standard order. ● pair each object with one number name (one-to-one correspondence). ● count to tell the number of objects. ● count objects arranged in any order. ● identify the last number named as the number of objects counted. Learning Goal 3: Assign an ascending number name for each object in a group. Learning Goal 4: State the last number named as the number of counted objects in the set. Learning Goal 5: Identify the next number name in counting as one greater than the previous number.

Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

● 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 1-10, count out that many object. Learning Goal 6: Answer *how many?* questions about groups of up to 10 objects when arranged in a line, rectangular array or circle. Learning Goal 7: Answer *how many?* questions about groups of up to 5 when arranged in a scattered configuration.
● 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 addition events with objects (up to 10). ● create addition events with drawings and sounds (up to 10). ● create addition events by acting out situations and with verbal explanations. Learning Goal 8: Create addition events with objects, fingers, drawings, sounds (e.g., claps), acting out situations and verbal explanations for sums up to 10.
● K.MD.B.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count *(benchmarked)	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): ● Objects can be sorted based on their properties. Students will be able to: ● sort objects into categories Learning Goal 9: Classify objects into given categories and count the objects in each category (up to 10 objects)
● K.G.A.1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, and next to.	MP.7 Look for and make use of structure.	Concept(s): ● Shapes have names. ● Positional words (above, below, besides, in front of, behind, next to) Students will be able to: ● name shapes in order to describe objects in the environment. ● use terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to* in order to describe relative positions of objects. Learning Goal 10: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

Unit 1 Kindergarten	
School/District Formative Assessment Plan	**School/District Summative Assessment Plan**
Pre-Assessment, Quizzes Exit Tickets Daily Monitoring	Unit Benchmark MAPS/I-Ready

Focus Mathematical Concepts

Prerequisite skills: (Pre-school by age 48 or 60 months)
Achieve the Core Coherence Map
https://achievethecore.org/coherence-map/

Standards:
K.CC.A.1 Recite numbers in order to ten with increasing accuracy.
K.CC.A.3 Begin to recognize and name a few written numbers. Identify without counting, the number of objects in a collection up to three objects. (i.e., subitize)
K.CC.B.4 Count up to five objects, using one to on correspondence (one object for each number word) with increasing accuracy
K.CC.B.5 Use the number name of the last object counted to answer the question, "How many…?"
K.OA.A.1 Represent addition and subtraction by manipulating up to 5 objects.
K.MD.B.3 Sort or classify objects by one attribute into two or more groups, with increasing accuracy.
K.G.A.1 Identify simple two-dimensional shapes, such as a circle and square.
Preschool Standards
http://www.nj.gov/education/news/2014/standards/PreschoolMath.pdf

Common Misconceptions:

K.CC.A.1

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.

K.CC.A.3

K.CC.3 addresses the writing of numbers and using the written numerals (0-20) to describe the amount of a set of objects. Due to varied development of fine motor and visual development, a reversal of numerals is anticipated for a majority of the students. While reversals should be pointed out to students, the emphasis is on the use of numerals to represent quantities rather than the correct handwriting formation of the actual numeral itself. 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.

K.CC.B.5

Some students might think that the count word used to tag an item is permanently connected to that item. So when the item is used again for counting and should be tagged with a different count word, the student uses the original count word. For example, a student counts four geometric figures: triangle, square, circle and rectangle with the count words: one, two, three, four. If these items are rearranged as rectangle, triangle, circle and square and counted, the student says these count words: four, one, three, two.

K.OA.A.1

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?

K.G.A.1

Students many times use incorrect terminology when describing shapes. For example students may say a cube is a square or that a sphere is a circle. The use of the two-dimensional shape that appears to be part of a three-dimensional shape to name the three-dimensional shape is a common misconception. Work with students to help them understand that the two-dimensional shape is a part of the object but it has a different name

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

Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

District/School Tasks	District/School Primary and Supplementary Resources
Examples of CCSS Items - Delaware Comparison Document **Delaware Common Core Item Bank for Mathematics – Kindergarten** http://www.doe.k12.de.us/cms/lib09/DE01922744/Centricity/Domain/111/Math_Grade_K.pdf	Text – Go Math **Think Central** https://www-k6.thinkcentral.com/ePC/viewResources.do?method=retrieveResources&pageName=resourcepage **XtraMath** https://xtramath.org/ **ThinkCentral Personal Math Trainer** **Kindergarten Flip Book:** http://community.ksde.org/Default.aspx?tabid=5646 **North Carolina Dept of Ed. Wikispaces:** http://maccss.ncdpi.wikispaces.net/Elementary **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
Instructional Best Practices and Exemplars	
1. Identifying similarities and differences 2. Summarizing and note taking 3. Reinforcing effort and providing recognition 4. Homework and practice 5. Nonlinguistic representations	6. Cooperative learning 7. Setting objectives and providing feedback 8. Generating and testing hypotheses 9. Cues, questions, and advance organizers 10. Manage response rates

Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

Vocabulary	
K.CC.1 & 3 **Know number names and the count sequence.** Introduce written number words zero, one, two…ten (students are not responsible for being able to read these words, but they should be introduced) Know digits and orally count to one hundred K.CC.1 & 3 **Count to tell the number of objects.** number, zero, one, two…thirteen, fourteen…nineteen How many? count on K.OA.1 **Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.** join, putting together, add, adding to, separate, subtract, taking apart, taking from, and same amount as, equal, less than, more than, total, count on	K.MD.3 **Classify objects and count the number of objects in categories.** compare, sort, category, color words (blue, green, red, etc.), descriptive words (small, big, rough, smooth, bumpy, round, flat, etc.), more, less, same amount K.G.1 **Identify and describe shapes.** Square, circles, triangle, rectangles, hexagon, cubes, cones, cylinder, sphere, flat, solid, side, corner, angle, edge, face, Above, below, beside, in front of , behind, next to, same, different, straight lines, curved (curvy) lines

9.1 Personal Financial Literacy, 9.2 Career Awareness, Exploration, Preparation and Training **9.4 Life Literacies and Key Skills**
9.1.2.PB.1 Determine various ways to save. 9.1.2.PB.2 Explain why an individual would choose to save money 9.1.2.RM.1 Describe how valuable items might be damaged or lost and ways to protect them. 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/educators/lessons-by-grade **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 assignments. 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. ☐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 ☐ Adjust Pacing of Content ☐ Small Group Intervention/Remediation ☐ Individual Intervention/Remediation ☐ Additional Support Materials ☐ Guided Notes ☐ Graphic Organizers ☐ Other Modifications for Special Education:

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

☐ 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
☐ 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

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

Suggested Modifications for Gifted Students

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

Winslow Schools

Mathematics Curriculum – Kindergarten

Unit 1

Suggested 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: 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.