## Winslow Schools

Mathematics Curriculum - Kindergarten
Unit 2

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

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

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| Curriculum Unit | Standards |  | Pacing |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Days | Unit Days |
| Unit 2 <br> Counting, Addition \& Subtraction | - K.CC.A.1* | Count to 50 by ones and by tens. <br> Represent a number of objects with a written numeral 0 to 20 . | 3 | 45 |
|  | - K.CC.A. 2 | Count forward up to 50 starting from numbers other than one. | 2 |  |
|  | - K.CC.A.3* | Represent a number of objects with a written numeral $\underline{0 \text { to } 20}$. | 3 |  |
|  | - K.OA.A.1* | Create addition and subtraction events with objects, fingers, drawings, sounds (e.g., claps), acting out situations and verbal explanations (up to 10). | 6 |  |
|  | - K.OA.A. 2 | Use objects or drawings to represent and solve addition and subtraction word problems (within 10). | 5 |  |
|  | - K.CC.B.5* | Answer how many? questions about groups of up to 20 objects when arranged in a line, rectangular array or circle. <br> Answer how many? questions about groups of up to 10 when arranged in a scattered configuration. | 4 |  |
|  | - 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 |  |

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| 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): <br> - Number names and the count sequence up to 50 <br> Students are able to: <br> - count orally by ones up to 50 . <br> - count orally by tens up to 50 . <br> 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. <br> MP. 7 Look for and make use of structure. | Concept(s): No new concept(s) introduced Students will be able to: <br> - count orally by ones up to 50 , beginning at any number. <br> 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. <br> MP. 7 Look for and make use of structure. | Concept(s): <br> - The number of objects can be represented by a numeral. <br> Students are able to: <br> - write numbers from 0 to 20 . <br> 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. <br> MP. 2 Reason abstractly and quantitatively. <br> MP. 4 Model with mathematics. <br> MP. 7 Look for and make use of structure. MP. 8 Look for and express regularity in repeated reasoning. | Concept(s): <br> - Understand addition as putting together and adding to. <br> - Understand subtraction as taking apart and taking from. <br> Students are able to: <br> - create subtraction and addition events with objects (up to 10 ). <br> - create subtraction and addition events with drawings and sounds (up to 10). <br> - create subtraction and addition events by acting out situations and with verbal explanations. <br> 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. <br> MP. 2 Reason abstractly and quantitatively. <br> MP. 4 Model with mathematics. <br> MP. 5 Use appropriate tools strategically. | Concept(s): No new concept(s) introduced <br> Students will be able to: <br> - use objects and drawings to represent addition and subtraction. <br> - add and subtract within 10. <br> Learning Goal 5: Use objects or drawings to represent and solve addition and subtraction word problems (within 10). |

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- 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)
- 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.
- K.CC.C.7. Compare two numbers between 1 and 10 presented as written numerals.
- K.OA.A.5. Demonstrate fluency for addition and subtraction within 5- (by the end of Kindergarten). *(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
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.

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.
MP. 7 Look for and make use of structure. $\quad$ Concept(s): No new concept(s) introduced MP. 8 Look for and express regularity in repeated reasoning.

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.

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Unit 2 Kindergarten

| 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
K.CC.A. 2
K.CC.A. 3
K.OA.A. 1
K.OA.A. 2
K.CC.B. 5
K.CC.C. 6
K.CC.C. 7
K.OA.A. 5

Recite numbers in order to twenty with increasing accuracy.
Recite numbers in order to twenty with increasing accuracy.
Recognize and know the name of some written numerals.
Represent addition and subtraction by manipulating up to 5 objects.

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

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#### Abstract

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).

\section*{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

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| District/School Tasks | District/School Primary and Supplementary Resources |
| :---: | :---: |
| Examples of CCSS Items - Delaware Comparison Document Delaware Common Core Item Bank for Mathematics - Kindergarten <br> http://www.doe.k12.de.us/cms/lib09/DE01922744/Centricity/Domain/111/Math_Grad e_K.pdf | Text: Go Math <br> Think Central <br> https://www- <br> k6.thinkcentral.com/ePC/viewResources.do?method=retrieveResources\&pageName=resou <br> rcepage <br> XtraMath <br> https://xtramath.org/ <br> ThinkCentral Personal Math Trainer <br> Kindergarten Flip Book: <br> http://community.ksde.org/Default.aspx?tabid=5646 <br> North Carolina Dept of Ed. Wikispaces: <br> http://maccss.ncdpi.wikispaces.net/Elementary <br> 101 Math Discourse Questions: <br> http://www.casamples.com/downloads/100MathDiscourseQuestions_Printable.pdf <br> Asking Effective Questions <br> http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_AskingEffectiveQu estions.pdf |
| Instructional Best Practices and Exemplars |  |
| 1. Identifying similarities and differences <br> 2. Summarizing and note taking <br> 3. Reinforcing effort and providing recognition <br> 4. Homework and practice <br> 5. Nonlinguistic representations | 6. Cooperative learning <br> 7. Setting objectives and providing feedback <br> 8. Generating and testing hypotheses <br> 9. Cues, questions, and advance organizers 10. Manage response rates |

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

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### 9.1 Personal Financial Literacy, 9.2 Career Awareness, Exploration, And Preparation and Training \& <br> 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.
9.1.2.FI. 1 Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards)
9.2.2.CAP. 1 Make a list of different types of jobs and describe the skills associated with each job

The implementation of the 21 st 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.
$\square$ Modify activities/assignments/projects/assessments
$\square$ Breakdown activities/assignments/projects/assessments into manageable units
$\square$ Additional time to complete activities/assignments/projects/assessments
$\square$ Provide an option for alternative activities/assignments/projects/assessments
$\square$ Modify Content
$\square$ Modify Amount
$\square$ Adjust Pacing of Content
$\square$ Individual Intervention/Remediation
$\square$ Additional Support Materials
$\square$ Guided Notes
$\square$ Graphic Organizers
$\square$ Small Group Intervention/Remediation
$\square$ Other Modifications for Special Education:

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## 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
$\square$ Modify activities/assignments/projects/assessments
$\square$ Breakdown activities/assignments/projects/assessments into manageable units
$\square$ Additional time to complete activities/assignments/projects/assessmentsProvide an option for alternative activities/assignments/projects/assessmentsModify Contentify Amount
$\square$ Adjust Pacing of Content
$\square$ Small Group Intervention/Remediation
$\square$ Individual Intervention/Remediation
$\square$ Additional Support Materials
$\square$ Guided Notes
$\square$ Graphic Organizers
$\square$ 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 K WIDA Can Do Descriptors: Listening $\square$ Speaking Reading $\square$ Writing Oral Language <br> Students will be provided with accommodations and modifications that may include: <br> - Relate to and identify commonalities in mathematics studies in student's home country <br> - Assist with organization <br> - Use of computer <br> - Emphasize/highlight key concepts <br> - Teacher Modeling <br> - Peer Modeling <br> - Label Classroom Materials - Word Walls | Students excelling in mastery of standards will be challenged with complex, high level challenges related to the topic. <br> - Raise levels of intellectual demands <br> - Require higher order thinking, communication, and leadership skills <br> - Differentiate content, process, or product according to student's readiness, interests, and/or learning styles <br> - Provide higher level texts <br> - Expand use of open-ended, abstract questions <br> - Critical and creative thinking activities that provide an emphasis on research and indepth study <br> - Enrichment Activities/Project-Based Learning/ Independent Study <br> Additional Strategies may be located at the links: <br> * Gifted Programming Standards <br> * Webb's Depth of Knowledge Levels and/or Revised Bloom's Taxonomy <br> * REVISED Bloom's Taxonomy Action Verbs |

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Suggested Activities


