

Winslow Schools
Mathematics Curriculum – Kindergarten
Unit 3

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 3 Place Value & Measurement	<ul style="list-style-type: none"> ● K.CC.A.1* ● K.MD.A.1 ● K.MD.A.2 ● K.MD.B.3* ● K.G.A.2 ● K.G.A.3 ● K.OA.A.3 ● K.OA.A.4 ● K.NBT.A.1* ● K.OA.A.5* 	<ul style="list-style-type: none"> ● Know number names and the count sequence to 70 ● Describe and compare measurable attributes ● Classify and count the number of objects in categories ● Identify and describe shapes ● Understand addition as putting together and adding to understand subtraction as taking apart and taking from ● Work with numbers 11-19 to gain foundations for place value 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p>
Unit 3: Suggested Open Educational Resources	<p>K.CC.A.1 Assessing Counting Sequences Part 1</p> <p>K.MD.A.1 Which is heavier?</p> <p>K.MD.A.2 Which is Longer?</p> <p>K.MD.B.3 Sort and Count 2</p> <p>K.OA.A.3 Shake and Spill</p> <p>K.OA.A.3 Pick Two</p> <p>K.NBT.A.1 What Makes a Teen Number</p> <p>K.OA.A.5 My Book of Five</p>	<p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	

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

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Curriculum Unit 3	Standards		Pacing	
			Days	Unit Days
Unit 3 Place Value & Measurement	● K.CC.A.1*	Count <u>to 70</u> by ones and by tens.	3	45
	● K.MD.A.1	Describe measurable attributes of multiple objects and describe several measurable attributes of a single object.	3	
	● K.MD.A.2	Directly compare two objects with a measurable attribute in common; use <i>more of</i> or <i>less of</i> to compare the objects.	4	
	● K.MD.B.3*	Count the objects in given categories and sort the categories by count (up to 10 objects).	3	
	● K.G.A.2	Correctly names shapes regardless of their orientation or overall size.	3	
	● K.G.A.3	Identify shapes as two-dimensional (lying in a plane, <i>flat</i>) or three-dimensional (<i>not flat, solid</i>).	2	
	● K.OA.A.3	Decompose numbers less than or equal to ten into pairs of numbers in more than one way and record with a drawing or equation.	7	
	● K.OA.A.4	Given a number less than 10, find the number that makes 10.	3	
	● K.NBT.A.1*	Compose and decompose numbers from 11 to 19 into a group of ten and one(s) with or without manipulatives; record each composition or decomposition through a drawing or equation.	10	
	● K.OA.A.5*	Use mental math strategies to solve addition and subtraction facts within 5.	4	
Assessment, Re-teach and Extension			3	

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
<ul style="list-style-type: none"> 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): <ul style="list-style-type: none"> Number names and the count sequence up to 70 Students are able to: <ul style="list-style-type: none"> count orally by ones <u>up to 70</u>. count orally by tens <u>up to 70</u>. Learning Goal 1: Count to 70 by ones and by tens.
<ul style="list-style-type: none"> K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. 	MP.7 Look for and make use of structure.	Concept(s): <ul style="list-style-type: none"> Measurable attributes: length, weight, size (volume) A single object can have more than one measurable attribute. Students are able to: <ul style="list-style-type: none"> identify measurable attributes. describe the measurable attributes of multiple objects. describe multiple measurable attributes of a single object. Learning Goal 2: Describe measurable attributes of multiple objects and describe several measurable attributes of a single object.
<ul style="list-style-type: none"> K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of” “less of” the attribute, and describe the differences. <i>example, directly compare the heights of two children and describe one child as taller/shorter.</i> 	MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): <ul style="list-style-type: none"> When comparing objects by measuring, each object must have the same starting point. Moving an object does not change its measure. Students are able to: <ul style="list-style-type: none"> directly compare and describe two objects with measurable attribute in common using <i>more of</i> or <i>less of</i>. Learning Goal 3: Directly compare two objects with a measurable attribute in common; use <i>more of</i> or <i>less of</i> to compare the objects.

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<ul style="list-style-type: none"> ● K.MD.B.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. *(benchmarked) 	<p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Groups can be sorted by the number of objects in each group. <p>Students are able to:</p> <ul style="list-style-type: none"> ● sort objects into groups. ● sort the group by count. <p>Learning Goal 4: Count the objects in given categories and sort the categories by count (up to 10 objects).</p>
<ul style="list-style-type: none"> ● K.G.A.2. Correctly name shapes regardless of their orientation or overall size. 	<p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Shapes have names. ● Shapes can have the same names but appear different. <p>Students are able to:</p> <ul style="list-style-type: none"> ● correctly names shapes regardless of their orientation or overall size. <p>Learning Goal 5: Correctly names shapes regardless of their orientation or overall size.</p>
<ul style="list-style-type: none"> ● K.G.A.3. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”) 	<p>MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Shapes may be <i>flat</i> or <i>solid</i>. <p>Students are able to:</p> <ul style="list-style-type: none"> ● identify shapes as two-dimensional (lying in a plane, <i>flat</i>) or three-dimensional (<i>not flat, solid</i>). ● compare two- and three- dimensional shapes, in different sizes, and orientations. <p>Learning Goal 6: Identify shapes as two-dimensional (lying in a plane, <i>flat</i>) or three-dimensional (<i>not flat, solid</i>).</p>
<ul style="list-style-type: none"> ● K.OA.A.3. Decompose numbers less than or equal to 10 into pairs in more than one way, <i>e.g. using objects or drawings</i>, and record each decomposition by a drawing or equation (<i>e.g. $5 = 3 + 2$ and $5 = 4 + 1$</i>) 	<p>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.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Part-to-whole relationships ● Some groups of objects can be broken into two smaller groups while the total number remains the same. ● Some groups of objects can be broken into two smaller groups in more than one way. <p>Students will be able to:</p> <ul style="list-style-type: none"> ● decompose numbers less than or equal to ten into two numbers. ● record the decomposition with a drawing. ● record the decomposition with an equation. ● decompose the same number in more than one way. <p>Learning Goal 7: Decompose numbers less than or equal to ten into pairs of numbers in more than one way and record with a drawing or equation.</p>

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<ul style="list-style-type: none"> ● K.OA.A.4. For any number from 1 to 9, find the number that makes 10 when added to the given number <i>e.g. by using objects or drawings</i>, and record the answer with a drawing or equation. 	<p>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.</p>	<p>Concept(s): No new concept(s) introduced Students are able to:</p> <ul style="list-style-type: none"> ● find a missing part of 10 using objects. ● given a number from 1 to 9, use drawings, or equations to find the number that makes 10. <p>Learning Goal 8: Given a number less than 10, find the number that makes 10.</p>
<ul style="list-style-type: none"> ● K.NBT.A.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, <i>e.g. by using objects or drawings</i>, and record each composition or decomposition by a drawing or equation (<i>e.g. $18 = 10 + 8$</i>); Understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. *(benchmarked) 	<p>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.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> ● Numbers from 11 to 19 can be represented as one group of ten <i>ones</i> and another group containing fewer than ten <i>ones</i>. <p>Students are able to:</p> <ul style="list-style-type: none"> ● compose and decompose numbers from 11 to 19 into a group of ten <i>ones</i> and another group of one(s). ● use the term <i>ones</i> to describe the number of objects in each group. ● record each composition or decomposition using objects and drawings. ● record each composition or decomposition by a drawing or equation. <p>Learning Goal 9: Compose and decompose numbers from 11 to 19 into a group of ten and one(s) with or without manipulatives; record each composition or decomposition through a drawing or equation.</p>
<ul style="list-style-type: none"> ● K.OA.A.5. Demonstrate fluency for 	<p>MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Concept(s): No new concept(s) introduced Students will be able to:</p> <ul style="list-style-type: none"> ● add and subtract within 5 with accuracy and efficiency. <p>Learning Goal 10: Use mental math strategies to solve addition and subtraction facts within 5.</p>

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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	
<p>Prerequisite skills: (Pre-school at about 48 or 60 months)</p> <p>Achieve the Core Coherence Map https://achievethecore.org/coherence-map/</p> <p>Standards:</p> <p>K.CC.A.1: Recite numbers in order to twenty with increasing accuracy.</p> <p>K.MD.A.1: Demonstrate awareness that objects can be compared by length, weight, or capacity, by noting gross differences, using words such as bigger, longer, heavier, or taller or by placing objects side by side to compare length.</p> <p>K.MD.A.2: Order three objects by size.</p> <p>K.MD.B.3: Sort and classify objects by one or more attributes, into two or more groups, with increasing accuracy (e.g., may sort first by one attribute and then by another attribute.)</p> <p>K.G.A.2: Identify, describe, and construct a variety of different shapes, including variations of circle, triangle, rectangle, square, and other shapes.</p> <p>K.G.A.3: Identify and describe a variety of different shapes, including variations of circle, triangle, rectangle, square, and other shapes.</p> <p>K.OA.A.3: Understand that putting two groups of objects together will make a bigger group and that a group of objects can be taken apart into smaller groups.</p> <p>K.OA.A.4: Solve simple addition problems with a small number of objects (sums up to 10), usually by counting.</p> <p>K.NBT.A.1: Compose and decompose numbers up to 10.</p> <p>K.OA.A.5: Solve simple addition and subtraction problems with a small number of objects (sums up to 10), usually by counting.</p> <p>Preschool Standards http://www.nj.gov/education/news/2014/standards/PreschoolMath.pdf</p>	

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Common Misconceptions:

Students have difficulty with *ten* as a singular word that means 10 things. For many students, the understanding that a group of 10 things can be replaced by a single object and they both represent 10 is confusing. Help students develop the sense of *ten* by first using groupable materials then replacing the group with an object or representing 10, such as a rod or 10 Frame. Watch for and address the issue of attaching words to materials and groups without knowing what they represent. If this misconception is not addressed early on it can cause additional issues when working with numbers 11-19 and beyond. At this stage you may encounter some students who when working with “grouped” materials will continue to count each object in the “ten group”. The students who do this are developmentally at the beginning of the idea of ten as a group. Some students may experience difficulty in being able to classify the same object into different categories. They see it as belonging to only one category.

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
<p>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</p>	<p>Go Math</p> <p>Think Central https://www-k6.thinkcentral.com/ePC/viewResources.do?method=retrieveResources&pageName=resourcepage</p> <p>XtraMath https://xtramath.org/</p> <p>ThinkCentral Personal Math Trainer</p> <p>Kindergarten Flip Book: http://community.ksde.org/Default.aspx?tabid=5646</p> <p>North Carolina Dept of Ed. Wikispaces: http://maccss.ncdpi.wikispaces.net/Elementary</p> <p>101 Math Discourse Questions: http://www.casamples.com/downloads/100MathDiscourseQuestions_Printable.pdf</p> <p>Asking Effective Questions http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS_AskingEffectiveQuestions.pdf</p>
Instructional Best Practices and Exemplars	
<ol style="list-style-type: none"> 1. Identifying similarities and differences 2. Summarizing and note taking 3. Reinforcing effort and providing recognition 4. Homework and practice 5. Nonlinguistic representations 	<ol style="list-style-type: none"> 6. Cooperative learning 7. Setting objectives and providing feedback 8. Generating and testing hypotheses 9. Cues, questions, and advance organizers 10. Manage response rates

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Vocabulary

K.CC.1

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)

K. OA. 4 and 5

Count to tell the number of objects.

number, zero, one, two...thirteen, fourteen...nineteen

How many? count on

K.G.2 & 3

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

K.MD.1, 2 & 3

Describe and compare measurable attributes.

compare, attribute, length, weight, heavy(ier), light(er), long(er), big, small(er), more of, less of, tall(er), short(er)

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.NBT.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

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

- 9.1.2.FP.2 Differentiate between financial wants and needs.
- 9.2.2.CAP.1 Make a list of different types of jobs and describe the skills associated with each job.
- 9.2.2.CAP.2 Explain why employers are willing to pay individuals to work.

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 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.

- | | |
|--|---|
| <input type="checkbox"/> Modify activities/assignments/projects/assessments | <input type="checkbox"/> Individual Intervention/Remediation |
| <input type="checkbox"/> Breakdown activities/assignments/projects/assessments into manageable units | <input type="checkbox"/> Additional Support Materials |
| <input type="checkbox"/> Additional time to complete activities/assignments/projects/assessments | <input type="checkbox"/> Guided Notes |
| <input type="checkbox"/> Provide an option for alternative activities/assignments/projects/assessments | <input type="checkbox"/> Graphic Organizers |
| <input type="checkbox"/> Modify Content | <input type="checkbox"/> Other Modifications for Special Education: |
| <input type="checkbox"/> Modify Amount | |
| <input type="checkbox"/> Adjust Pacing of Content | |
| <input type="checkbox"/> Small Group Intervention/Remediation | |

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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

- | | |
|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Modify activities/assignments/projects/assessments <input type="checkbox"/> Breakdown activities/assignments/projects/assessments into manageable units <input type="checkbox"/> Additional time to complete activities/assignments/projects/assessments <input type="checkbox"/> Provide an option for alternative activities/assignments/projects/assessments <input type="checkbox"/> Modify Content <input type="checkbox"/> Modify Amount <input type="checkbox"/> Adjust Pacing of Content | <ul style="list-style-type: none"> <input type="checkbox"/> Small Group Intervention/Remediation <input type="checkbox"/> Individual Intervention/Remediation <input type="checkbox"/> Additional Support Materials <input type="checkbox"/> Guided Notes <input type="checkbox"/> Graphic Organizers <input type="checkbox"/> 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](#)

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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.