

Winslow Schools
Mathematics Curriculum – Kindergarten
Unit 4

Overview	Standards for Mathematical Content	Unit Focus	Standards for Mathematical Practice
Unit 4 Place Value & Geometric Shapes	<ul style="list-style-type: none"> ● K.CC.A.1* ● K.OA.A.5* ● K.G.B.4 ● K.G.B.5 ● K.G.B.6 ● K.NBT.A.1* 	<ul style="list-style-type: none"> ● Know number names and the count sequence to 100 ● Fluently add and subtract within 5 ● Analyze, compare, create, and compose shapes ● 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> <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>
Unit 4: Suggested Open Educational Resources	<p>K.CC.A.1 Counting by Tens K.G.B.4 Alike or Different Game K.NBT.A.1 What Makes a Teen Number</p>		

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

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Curriculum Unit 4	Standards		Pacing	
			Days	Unit Days
Unit 4 Place Value & Geometric Shapes	● K.CC.A.1*	Count to <u>100</u> by ones and by tens.	4	45
	● K.OA.A.5*	Fluently add and subtract within 5.	6	
	● K.G.B.4	Use informal language to describe similarities, differences, parts number of sides, number of <i>corners</i>), and other attributes (having sides of equal length) when comparing two- and three- dimensional shapes, in different sizes and orientations.	6	
	● K.G.B.5	Model shapes in the world by building and drawing shapes.	3	
	● K.G.B.6	Compose simple shapes to form larger shapes.	5	
	● 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.	8	
	Re-teach and Extension		10	
	Assessment		3	

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Unit 4 Kindergarten		
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 100 Students are able to: <ul style="list-style-type: none"> ● count orally by ones <u>up to 100.</u> ● count orally by tens <u>up to 100.</u> Learning Goal 1: Count to 100 by ones and by tens.
<ul style="list-style-type: none"> ● 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 are able to: <ul style="list-style-type: none"> ● add and subtract within 5 with accuracy and efficiency. Learning Goal 2: Fluently add and subtract within 5.
<ul style="list-style-type: none"> ● K.G.B.4. Analyze and compare two- and three- dimensional shapes, in different sizes, and orientations, using informal language to describe their similarities, differences, parts (<i>e.g. number of sides and vertices “corners”</i>) and other attributes (<i>e.g. having sides of equal length</i>). 	MP.7 Look for and make use of structure.	Concept(s): <ul style="list-style-type: none"> ● Orientation does not alter attributes or size. ● Shapes may have sides of unequal or equal length. ● Shapes may or may not have the same number of sides or ‘corners’. Students are able to: <ul style="list-style-type: none"> ● compare two- and three- dimensional shapes in different sizes and in different orientations and identify similarities and differences. ● compare parts of two- and three-dimensional shapes [e.g. number of sides, number of vertices (<i>corners</i>)]. ● compare attributes of two- and three-dimensional shapes [e.g. sides have equal length.] ● use informal language to describe similarities, differences, parts, and other attributes when comparing two-and three-dimensional shapes, in different sizes and orientations. Learning Goal 3: Use informal language to describe similarities, differences, parts number of sides, number of <i>corners</i>), and other attributes (having sides of equal length) when comparing two- and three- dimensional shapes, in different sizes and orientations.

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<ul style="list-style-type: none"> • K.G.B.5. Model shapes in the world by building shapes from components (<i>e.g., sticks and clay balls</i>) and drawing shapes. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> • Basic shapes exist in real world objects. <p>Students are able to:</p> <ul style="list-style-type: none"> • recognize basic shapes in the real world. • use objects (clay, sticks, etc) to model shapes. • model shapes in the world by drawing shapes. <p>Learning Goal 4: Model shapes in the world by building and drawing shapes.</p>
<ul style="list-style-type: none"> • K.G.B.6. Compose simple shapes to form larger shapes. <i>example: “Can you join these two triangles with full sides touching to make a rectangle?”</i> 	<p>MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics. MP.7 Look for and make use of structure.</p>	<p>Concept(s):</p> <ul style="list-style-type: none"> • Shapes can be combined to make larger shapes. <p>Students are able to:</p> <ul style="list-style-type: none"> • compose simple shapes to form larger shapes. <p>Learning Goal 5: Compose simple shapes to form larger shapes.</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 6: 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>

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Unit 4 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	
<p><u>Prerequisite skills:</u> Achieve the Core Coherence Map https://achievethecore.org/coherence-map/</p> <p>Standards:</p> <p>K.CC.A.1: Recites numbers in order to fifty with increasing accuracy.</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>K.G.B.4: Identify, describe, and construct a variety of different shapes, including variations of circle, triangle, rectangle, square, and other shapes.</p> <p>K.G.B.5: Use individual shapes to represent different elements of a picture or design.</p> <p>K.G.B.6: Combine different shapes to create a picture design.</p> <p>K.NBT.A.1: Understand that numbers 11-19 are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones</p> <p>Preschool Standards http://www.nj.gov/education/news/2014/standards/PreschoolMath.pdf</p>	

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Common Misconceptions:

One of the most common misconceptions in geometry is the belief that orientation is tied to shape. A student may see the first of the figures below as a triangle, but claim to not know the name of the second.

Students need to have many experiences with shapes in different orientations. For example, in the *Just Two Triangles* activity, ask students to form larger triangles with the two triangles in different orientations.

Another misconception is confusing the name of a two-dimensional shape with a related three-dimensional shape or the shape of its face. For example, students might call a *cube* a *square* because the student sees the face of the cube.

It is important when students are exploring 2-dimensional shapes (flat) that the shapes they are working with are on paper or other “FLAT” material.

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>Text: 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.5

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.G.4, 5 & 6

Analyze, compare, create, and compose shapes.

compare, compose, attributes, sides, vertices/corners, vertex, two- and three-dimensional, same, different

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

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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

- | | |
|---|--|
| <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 | <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.