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| PGCPS | **Kindergarten Mathematics**<br>**Course Syllabus** |
| Content | Prince George's County Public Schools |

**Prerequisites**: None

Course Description: In Kindergarten, instructional time should focus on two critical areas; (1) representing and comparing whole numbers, initially with sets of objects; (2) describing shapes and space. More learning time in Kindergarten should be devoted to number than to other topics.

(1) Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; counting out a given number of objects; comparing sets or numerals; and modeling simple joining and separating situations with sets of objects, or eventually with equations such as 5 + 2 = 7 and 7 – 2 = 5. (Kindergarten students should see addition and subtraction equations, and student writing of equations in kindergarten is encouraged, but it is not required.) Students choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.

(2) Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic two-dimensional shapes, such as squares, triangles, circles, rectangles, and hexagons, presented in a variety of ways (e.g., with different sizes and orientations), as well as three-dimensional shapes such as cues, cones, cylinders, and spheres. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

****The Standards for Mathematical Practice: The eight Standards for Mathematical Practice will be embedded in all mathematics instruction preK-12 and outline how students should think, reason, communicate and model mathematically. The eight practices are:**

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

** Details for each practice may be found at http://mdk12.msde.maryland.gov/instruction/academies/resources/Mathematics/MathD1/Standards_for_Mathematical%20_Practice.pdf

**Fluency Definition:** **Skill in carrying out procedures flexibly, accurately, efficiently and appropriately.**

**Kindergarten Fluency Expectation:** **Students will be able to add and subtract within 10 and fluently within 5.**

## INSTRUCTOR INFORMATION:

NAME: Ms. Keyser / Ms. Carillo
E-MAIL ADDRESS: Seairra.keyser@pgcps.org / Ailyn.carillo@pgcps.org

## GRADING POLICY:

### Elementary Mathematics
### (Grades K and 1)

**Overview:** The goal of grading and reporting is to provide the students with feedback that reflects their progress toward the mastery of the indicators and objectives found in the Mathematics Curriculum Framework Progress Guide.

Teachers will determine the range of points for each assignment and place the assignment in SchoolMax; SchoolMax will then convert the points to a percentage and then the percentage will be converted to a grade of a PR, IP, or ND. **Example Scoring Rubric located after Grades K and 1.

| Factors | Brief Description | Grade Percentage Per Quarter |
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| **Class Work** | This includes all work completed in the classroom setting. Class work must include, but is not limited to:<br>● Use of manipulatives<br>● Graphic representations<br>● Group work<br>● Student discourse<br>● Class assignments | **50%** |
| **Independent Assignments** | This includes all work completed outside the classroom to be graded on its completion. Assignments can include, but are not limited to:<br>● Written assignments (teacher made, Problem of the Week, text materials)<br>● Problem Solving (table setting, time Problems, measurement)<br>● Observation of natural occurrences of mathematics (shapes, patterns, symmetry) | **10%** |
| **Assessments** | This category encompasses both the traditional (paper and pencil exams) and alternative methods of assessing student learning with the goal of mastery. | |

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| | Assessments can include but are not limited to:<br>● Written exams and quizzes<br>● Portfolios<br>● Projects<br>● Presentations<br>● Problem of the Week<br>● Anecdotal notes of teacher observation<br>● Student interview | **40%** |

## Kindergarten and First Grade Scoring Rubric

| Indicator on Child's Work | Teacher's Grade Book | Report Card Equivalent | Description |
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|  | 9 or 10 | **PR**<br>Proficient<br>90 – 100% | Student can demonstrate indicator independently. |
|  | 8 | **IP**<br>In Process<br>80 – 89% | Student can demonstrate indicator with minimal adult support. |
|  | 7 | **EM**<br>Emerging<br>70 – 79% | Student demonstrates indicator occasionally with some adult support. |
|  | 5 or 6 | **ND**<br>Needs Development<br>50 - 69% | Student cannot demonstrate indicator. |

Teachers are to use observations ("kid watching"), anecdotal records and child portfolio entries to support scoring

# Kindergarten Mathematics Draft Curriculum Sequence

| Quarter 1 | | |
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| **Unit 0 - The First 5 Days and Week of School** | | |
| **Unit** | **Big Idea** | **Standard** |
| Unit 1<br>**Playing with Shapes**<br><br>(10 days) | Two- and three-dimensional objects can be described and named. In this unit, the focus is on describing the difference between two-dimensional (flat) and three-dimensional (solid) objects | K.G.A.1<br>K.G.A.2<br>K.G.A.3 |
| Unit 2<br>**Numbers to 10**<br><br>(17 days) | A number has a word and a symbol that corresponds to the quantity. Quantities can be sequenced and compared. The focus in this unit is on the numbers 0–10. | K.CC.A.1<br>K.CC.C.7<br>K.CC.A.2<br>K.CC.A.3<br>K.CC.B.4 a, b, c<br>K.CC.B.5<br>K.CC.C.6 |
| Unit 3<br>**Compose and Decompose Numbers to 10**<br><br>(13 days) | Smaller numbers can be composed into larger numbers and larger numbers can be decomposed into smaller numbers. The focus in this unit is the combinations of numbers to 10. | K.OA.A.3<br>K.OA.A.4 |
| **Quarter 2** | | |
| Unit 4<br>**Describe and Compose 2-D Shapes**<br><br>(12 days) | Two-dimensional objects can be described, classified, and analyzed by their attributes. 2-D shapes can be used to build composite shapes. | K.G.A.1<br>K.MD.B.3<br>K.G.A.2<br>K.G.B.4<br>K.G.B.5<br>K.G.B.6 |

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| Unit 5<br>**Addition and Addition Situations**<br><br>(15 days) | Real-world problems involving joining can be solved using addition. Adding quantities greater than zero gives a sum that is greater than any addend. | K.OA.A.1<br>K.OA.A.2<br>K.OA.A.5 |
| Unit 6<br>**Subtraction and Subtraction Situations**<br><br>(15 days) | Real-world problems involving separating, or comparing can be solved using subtraction. Subtraction can be seen as taking away. | K.OA.A.1<br>K.OA.A.2<br>K.OA.A.5 |
| **Quarter 3** | | |
| **Unit** | **Big Idea** | **Standard** |
| Unit 7<br>**Describe and Compose 3-D Shapes**<br><br>(11 days) | 3-dimensional objects can be described, classified, and analyzed by their attributes. Simple shapes can be combined to create complex shapes. | K.G.A.1<br>K.G.A.2<br>K.G.B.4<br>K.G.B.5<br>K.G.B.6 |
| Unit 8<br>**Numbers to 20**<br><br>(11 days) | A number has a word and a symbol that correspond to a quantity. Quantities can be sequenced and compared. The focus in this unit is on the numbers 11–20. | K.CC.A.1<br>K.CC.A.2<br>K.CC.A.3<br>K.CC.B.4 a, b, c<br>K.CC.B.5<br>K.CC.C.6<br>K.CC.C.7 |
| Unit 9<br>**Compose and Decompose Numbers to 20**<br><br>(10 days) | The base ten system builds upon units of ten. The teen numbers constitute 10 ones and some more ones. | K.NBT.A.1 |
| **Quarter 4** | | |

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| Unit 10<br>**Length, Weight, and Capacity**<br><br>(10 days) | Some attributes of objects are measurable and the measurements can be compared. The focus in this unit is recognizing the same attribute in different objects and determining which object has more or less. | K.MD.A.1<br>K.MD.A.2<br>K.MD.B.3 |
| Unit 11<br>**Numbers to 100**<br><br>(10 days) | Each number has a word and a symbol that corresponds to its quantity. Quantities can be sequenced and compared. The focus in this unit is on discovering the base ten pattern of the counting numbers. | K.CC.A.1<br>K.CC.A.2<br>K.CC.B.4 a, b, c |
| Unit 12<br>**Mastering Addition and Subtraction to 5**<br><br>(10 days) | Real-world problems involving several kinds of situations can be solved using addition or subtraction. These situations include: *Add To - Result Unknown; Take From - Result Unknown; Put Together/Take Apart - Total Unknown; and Put Together/Take Apart - Both Addends Unknown.* The focus in this unit is fluency with combinations within five. | K.OA.A.1<br>K.OA.A.2<br>K.OA.A.5 |

**Kindergarten Fluency Expectations:**

- **K.OA.A.5 -** *Add and subtract within 5.*