Pennsylvania Kindergarten Education Standards Math
Early Childhood Observation System (ECHOS)

For each student indicate his or her level of achievement in the beginning, middle, and end of the year using the key below.

NY (Not Yet): indicates that the child has not yet acquired the skill, area of knowledge, accomplishments, or specific set of behaviors represented by the indicator.

IP (In Progress): Indicates that the skill, area of knowledge, accomplishment, or set of behaviors represented by the indicator is intermittent or emergent and the child does not demonstrate it reliably or consistently.

P (Proficient): indicates that the child can reliably demonstrate the skill, area of knowledge, accomplishments, or set of behaviors, and may have advanced beyond that level of difficulty of the indicator and no longer participate in activities described by the indicator.

Student Name_____ **Teacher** _____

Kindergarten Standards Math	Beg After 60 days	Mid After 120 days	End After 180 days	**ECHOS Domain-Sub Domain-Benchmark(s)**	**Corresponding ECHOS Benchmark(s)**
2.1 Numbers, Number Systems and Number Relationships					
2.1.A. Count using whole numbers (to 100) by ones and tens (rote counting)				**2.A.1**	Counts objects in a collection by creating one-to-one correspondence between number word and each object
2.1.B. Use concrete objects to represent quantities up to and including 20				**2.A.1**	Counts objects in a collection by creating one-to-one correspondence between number word and each object
2.1.C. Represent equivalent forms of the same number through the use of concrete objects and drawings up to and including 20				**2.A.2**	Uses numbers up to 10 to compare and order Collections

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				2.A.3	Develops abstract mathematical thinking by using written symbols for collections and numerical relationships
2.1.D. Use concrete objects to separate a set into two equal parts using the terms half and whole				**2.A.6**	Separates a whole by breaking it up into equal size parts and connects fraction names to equal parts
2.1.E. Use concrete objects to group into sets of ten				**2.A.6**	Separates a whole by breaking it up into equal size parts and connects fraction names to equal parts
2.1.F. Use concrete objects to demonstrate understanding of one-to-one correspondence up to and including 20				**2.A.1**	Counts objects in a collection by creating one-to-one correspondence between number word and each object
2.1.G. Count, read, and write whole numbers 0 to 20				**2.A.1**	Counts objects in a collection by creating one-to-one correspondence between number word and each object
2.1.H. Identify numbers before, after, and between 0 –20				**2.A.1** **2.A.2**	Counts objects in a collection by creating one-to-one correspondence between number word and each object Uses numbers up to 10 to compare and order collections
2.2 Computation and Estimation					
2.2.C. Represent addition and subtraction in everyday situations using up to ten concrete objects				**2.A.4**	Solves different types of addition and subtraction verbal word problems
2.2.D. Use concrete objects to explain the results of joining and separating sets of objects in quantities up to and including ten				**2.A.5**	Develops number sense, including knowledge of number partners; breaks numbers apart and recombines them to form the whole
2.2.E. Separate concrete objects into equal groups				**2.A.6**	Separates a whole by breaking it up into equal size parts and connects fraction names to equal parts

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2.2.F. Determine the sum of the same two one-digit numbers using concrete objects and/or pictures (3+3=6)				**2.A.5**	Develops number sense, including knowledge of number partners; breaks numbers apart and recombines them to form the whole
2.3 Measurement and Estimation					
2.3.A. Understand the spatial concepts of over, under, beside, in, out, around, on and between				**2.B.5**	Specifies directions, routes, and locations in the world, sometimes using numbers
2.3.B. Compare two objects using direct comparison				**2.C.1**	Recognizes measurable attributes of objects and the units, systems, and processes of measurement
2.3.C. Estimate and measure objects using nonstandard units				**2.C.2**	Applies appropriate techniques, tools, and formulas to measure
2.3.D. Determine the length and height of objects with nonstandard units (e.g. hands, shoe lengths, jelly beans)				**2.C.2**	Applies appropriate techniques, tools, and formulas to measure
2.3.E. Describe the instruments used for measuring time, length, weight, volume, and temperature				**2.C.2**	Applies appropriate techniques, tools, and formulas to measure
2.4 Mathematical Reasoning and Connections					
2.4.A. Use math vocabulary comparison terms when making predictions regarding the quantity, size, and shape of objects				**2.C.1**	Recognizes measurable attributes of objects and the units, systems, and processes of measurement
2.4.B. Identify the use of measurement in everyday situations				**2.C.2**	Applies appropriate techniques, tools, and formulas to measure
2.5 Mathematical Problem Solving and Communication					
2.5.C. Demonstrate various strategies to solve a problem				**2.A.4**	Solves different types of addition and subtraction verbal word problems
2.6 Statistics and Data Analysis					
2.6.A. Gather, organize and display data on a bar graph and/or pictograph				**2.E.1**	Analyzes data by classifying, organizing, representing, and using information to ask and answer questions
2.6.B. Analyze a chart or graph that displays data and make a prediction				**2.E.1**	Analyzes data by classifying, organizing, representing, and using information to ask and answer questions

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2.6.C. Answer questions based on data shown on graphs or charts				**2.E.1**	Analyzes data by classifying, organizing, representing, and using information to ask and answer questions
2.6.D. Use data from graphs to answer questions and form opinions				**2.E.1**	Analyzes data by classifying, organizing, representing, and using information to ask and answer questions
2.7 Probability and Predictions					
2.7.B. Compare sets of data using the concepts of largest, smallest, most, and least. Explain if an event is fair or unfair				**2.A.6**	Separates a whole by breaking it up into equal size parts and connects fraction names to equal parts
2.8 Algebra and Functions					
2.8.A. Identify, describe, and extend patterns based on shape, size, color, sound, or number				**2D.1**	Recognizes, creates, and analyzes patterns
2.8.B. Use concrete objects to show equal or not equal				**2.A.2**	Uses numbers up to 10 to compare and order collections
2.8.C. Recreate a simple story problem using concrete objects or pictures				**2.A.4**	Solves different types of addition and subtraction verbal word problems
2.8.D. Use concrete objects and trial and error to represent a number story				**2.A.4**	Solves different types of addition and subtraction verbal word problems
2.8.E. Use concrete objects or pictures to represent a number story that involves a missing addend				**2.A.4**	Solves different types of addition and subtraction verbal word problems
2.9 Geometry					
2.9.A. Identify common two and three-dimensional geometric shapes				**2.B.1** **2.B.6**	Identifies two and three-dimensional geometric shapes and their uses
2.9.B. Create and reproduce geometric designs using concrete objects				**2.B.2** **2.B.4**	Forms shapes into other shapes, structures, or components Associates geometric transformations with moving and changing shapes
2.9.C. Draw and/or construct two-dimensional geometric shapes				**2.B.1** **2.B.6**	Identifies two and three-dimensional geometric shapes and their uses

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2.9.D. Name and describe two-dimensional geometric shapes in real life				**2.B.1** **2.B.6**	Identifies two and three-dimensional geometric shapes and their uses
2.9.F/G. Identify a reflection and create a reflection				**2.B.4**	Associates geometric transformations with moving and changing shapes
2.9.H. Identify geometric shapes that are turned in different ways				**2.B.3** **2.B.4**	Analyzes, compares, and classifies shapes to understand them and their relation to each other Associates geometric transformations with moving and changing shapes
2.10 Trigonometry					
2.10.A. Identify triangles in the environment and discuss how they are alike and different				**2.B.1**	Identifies two-dimensional geometric shapes and their uses
2.11 Calculus					
2.11.A. Order whole numbers (0-20) from least to greatest value				**2.A.2**	Uses numbers up to 10 to compare and order collections

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