PA Core Standards For Mathematics
Curriculum Framework
Grade Level PRE-K

Grade	Big Idea	Essential Questions	Concepts	Competencies	Standard	Eligible Content	Vocabulary
Pre-K	Mathematical relationships among numbers can be represented, compared, and communicated.	How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?	Numerical Sequence	Rote count to 20. Name numerals up to 10. Represent a number of objects with a written numeral 0-10.	CC.2.1.PREK.A.1		Above Addition Below Beside Between Circle
Pre-K	Mathematical relationships among numbers can be represented, compared, and communicated. Patterns exhibit relationships that can be extended, described, and generalized.	How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication? How can patterns be used to describe relationships in mathematical situations?	Object Quantity	Recognize small quantities up to 6. Use a one-to-one correspondence when counting to 10. State the total number of objects counted, demonstrating understanding that that number named tells the number of objects counted.	CC.2.1.PREK.A.2		Cone Cube Cylinder Equal Greater than Length Less than Measure Numeral Rectangle Sphere Square
Pre-K	Mathematical relationships among numbers can be represented, compared, and communicated.	How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication?	Number Comparison	Identify whether the number of objects in one group is greater than, less than or equal to the number of objects in another group up to 10. Compare two numbers between 1 and 5 when presented as written numerals.	CC.2.2.PREK.A.3		Subtraction Three dimensional shapes Triangle Two dimensional shapes Weight
Pre-K	Mathematical relationships among numbers can be represented, compared, and communicated. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.	How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication? How are relationships represented mathematically? How can recognizing repetition or	Addition and Subtraction	Represent addition and subtraction with objects, fingers, mental images, and drawings, sounds, acting out situations, verbal explanations, expressions, or equations. Explain adding and subtracting sets of objects up to and including six.	CC.2.2.PREK.A.1		

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	Patterns exhibit relationships that can be extended, described, and generalized.	regularity assist in solving problems more efficiently?					
Pre-K	Mathematical relationships among numbers can be represented, compared, and communicated. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations. Patterns exhibit relationships that can be extended, described, and generalized.	How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication? How are relationships represented mathematically? How can recognizing repetition or regularity assist in solving problems more efficiently?	Addition and Subtraction	Represent addition and subtraction with objects, fingers, mental images, and drawings, sounds, acting out situations, verbal explanations, expressions, or equations. Explain adding and subtracting sets of objects up to and including six.	CC.2.3.PREK.A.1		
Pre-K	Patterns exhibit relationships that can be extended, described, and generalized. Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.	How can patterns be used to describe relationships in mathematical situations? How can recognizing repetition or regularity assist in solving problems more efficiently? How are spatial relationships, including shape and dimension, used to draw, construct, model, and represent real situations or solve problems? How can the application of the attributes of geometric shapes support mathematical reasoning and	Shape Identification and Description	Identify shapes as two-dimensional or three-dimensional. Describe objects in the environment using names of shapes and describe the relative positions of these objects.	CC.2.3.PREK.A.2		

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		problem solving? How can geometric properties and theorems be used to describe, model, and analyze situations?					
Pre-K	Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. Measurement attributes can be quantified, and estimated using customary and non-customary units of measure. Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.	What does it mean to estimate or analyze numerical quantities? What makes a tool and/or strategy appropriate for a given task? Why does "what" we measure influence "how" we measure? In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted? How can data be organized and represented to provide insight into the relationship between quantities?	Measureable Attributes	Describe measurable attributes of objects, such as length and weight. Sort and order by one attribute. Compare two objects with a measureable attribute in common and describe the difference.	CC.2.4.PREK.A.1		
Pre-K	Numerical quantities, calculations, and measurements can be estimated or analyzed by	What does it mean to estimate or analyze numerical quantities? What makes a tool and/or strategy	Object Classification and Count	Classify up to 10 objects using one attribute into categories; display the number of objects in each category; count and	CC.2.4.PREK.A4		

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	using appropriate strategies and tools. Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions. Data can be modeled and used to make inferences.	appropriate for a given task? How can data be organized and represented to provide insight into the relationship between quantities? How does the type of data influence the choice of display?		compare the quantities of each category.			