Archdiocese of New York Pre-Kindergarten Mathematics Parent Matrix

This parent matrix is intended to be a tool for you as a parent to help support your child's learning. The table below contains all of the Pre-Kindergarten Mathematics learning standards. Learning standards describe the knowledge and skills that students should master by the end of Pre-Kindergarten. Each standard has a specific code. For example, PK.CC.1 stands for "Pre-Kindergarten Counting and Cardinality Standard 1." You will often see these standards referenced on your child's quizzes, worksheets, tests, etc.

You should access the recommended resources in the right hand "Resources" column electronically by clicking on the hyperlinks provided. ***However, we suggest that you also download and print this matrix***. You will notice that the column all the way to the left is marked "Parent Notes." You can use this column to take notes on your child's progress. You may wish to check off each standard after you have worked on it with your child.

In Pre-Kindergarten Mathematics, there are four main domains of standards. These include Counting & Cardinality, Operations & Algebraic Thinking, Measurement & Data, and Geometry. Each category is highlighted in a different color. ***Your child's teacher will be able to tell you which standards you should focus on with your child throughout the year.***

We hope that this parent matrix is a valuable resource for you. If you find that you would like additional practice materials to work on you can use the standard codes provided below to search for additional resources.

Counting & Cardinality	Operations & Algebraic Thinking	Measurement & Data	Geometry
These standards focus on students' understanding that numbers represent quantities. They will learn to sequence, count, and compare numbers.	These standards focus on relationships among numbers and quantities – including patterns, functions, and operations (addition, subtraction, etc).	These standards pertain to students' ability to use different strategies and mathematical tools such as rulers and clocks to measure lengths and time and interpret and represent data in different ways (e.g. on a number line, bar graph, picture graph, etc).	These standards require students to examine, describe, and produce both 2-D and 3-D geometric shapes (e.g. circles, triangles, rectangles).

COUNTING AND CARDINALITY					
Parent Notes	**Standard Code**	**Standard**	**What does this standard mean?**	**What can I do at home?**	**Resources**
	Counting and Cardinality Grade PK Standard 1 (PK.CC.1)	Count to 20	Students must know counting sequence from 1 to 20.	Ask your child to count aloud to 20. Count along with him/her.	https://www.youtube.com/watch?v=l9tp1Ni0Cog http://search.myway.com/search/video.jhtml?searchfor=counting+objects+to+five&p2=%5EUX%5Exdm869%5ES11903%5Eus&n=781aa057&ptb=F7632951-6E5D-49CE-A59A-9E4738C12A1A&si=XXXXXXXXX&trs=hps&ss=sub&st=tab&tpr=sbt
	Counting and Cardinality Grade PK Standard 2 (PK.CC.2)	Represent a number of objects with a written numeral 0-5	Students should be able to count and write the numerals 0 to 5	Ask your child to count their steps, various objects that are in a room, or in your shopping cart. Count along with them.	http://search.myway.com/search/video.jhtml?searchfor=counting+objects+to+five&p2=%5EUX%5Exdm869%5ES11903%5Eus&n=781aa057&ptb=F7632951-6E5D-49CE-A59A-9E4738C12A1A&si=XXXXXXXXX&trs=hps&ss=sub&st=tab&tpr=sbt

	Counting and Cardinality Grade PK Standard 3 (PK.CC.3)	Understand the relationship between number and quantities to 10	Students must know the number names in standard order, pairing each object with one and only one number name and each number name with one object. They should understand that the last number tells the number of objects counted regardless of order. Students must know that each successive number refers to a quantity that is one larger	Ask your child to count their fingers on each hand. Do this with other objects or things that there are 10 of in your home.	https://www.youtube.com/watch?v=glkQwKA5_PU http://www.ezschool.com/play/math/how-many-apples-are-on-the-tree/123 https://www.youtube.com/watch?v=8WdiTtioi64
	Counting and Cardinality Grade PK Standard 4 (PK.CC.4)	Count to answer "how many" questions about as many as 10 things arranged in a line, a rectangle array, or circle, or as many as 5 things in a scattered configuration. Given a number from 1 to 10, count out that many objects	Students should be able to count out the number of items in a group with any pattern up to 10 objects.	Ask your child to count out various numbers of pennies (or any of the same coin) and arrange them in different patterns.	http://search.myway.com/search/video.jhtml?searchfor=counting+objects+to+five&p2=%5EUX%5Exdm869%5ES11903%5Eus&n=781aa057&ptb=F7632951-6E5D-49CE-A59A-9E4738C12A1A&si=XXXXXXXXX&trs=hps&ss=sub&st=tab&tpr=sbt https://www.youtube.com/watch?v=_jxzZMw89qY&feature=youtu.be

	Counting and Cardinality Grade PK Standard 5 (PK.CC.5)	Identify whether the number of objects in one group is more, less than, or greater than, fewer and/or equal to the number of objects in another group	Students should use counting strategies to compare the number of objects in a group	Ask your child to identify groups that have the most number of objects or the least number of objects. You can use simple items such as buttons and coins to make comparisons	https://www.youtube.com/watch?v=QN0V8YUkCbM
	Counting and Cardinality Grade PK Standard 6 (PK.CC.6)	Identify "first" and "last" related to order or position.	Students should know the difference between something (or someone) that is first and last in a line.	Ask your child to identify objects that are first or last in a line when you go shopping or waiting for a bus and a line forms.	https://www.youtube.com/watch?v=Sd6btU2ZOXY
OPERATIONS AND ALGEBRAIC THINKING					
Parent Notes	**Standard Code**	**Standard**	**What does this standard mean?**	**What can I do at home?**	**Resources**
	Operations and Algebraic Thinking Grade PK Standard 1 (PK.OA.1)	Demonstrate an understanding of addition and subtraction using objects, fingers, and responding to practical situations	Students should understand that if they have 3 apples and add two more, they have five all together.	Ask your child to count out objects into two parts and then add them together. Do this for up to 5 similar objects.	https://www.youtube.com/watch?v=TwEUFTiJX80

	Operations and Algebraic Thinking Grade PK Standard 2 (PK.OA.2)	Duplicate and extend simple patterns using concrete objects.	Students should be able to follow a pattern and continue it	Ask your child to make a pattern using different objects such as various fruit (apple, orange, apple, orange) or apple, apple, banana, apple, apple, banana.	https://www.youtube.com/watch?v=JgxZqsBc7qo http://songsforteaching.com/math/patterns/handclaprap.htm
MEASUREMENT AND DATA					
Parent Notes	**Standard Code**	**Standard**	**What does this standard mean?**	**What can I do at home?**	**Resources**

	Measurement and Data Grade PK Standard 1 (PK.MD.1)	Identify measureable attributes of objects such as length and weight. Describe them using correct vocabulary	Students should be able to describe and compare measureable attributes such as small, big, tall, empty, full, light.	Ask your child to compare the length of different objects such as their height compared to other siblings. Use a variety of objects that permit your child to compare length and weight. (For example, string)	http://www.onlinemathlearning.com/big-and-small.html http://www.songsforteaching.com/math/beginningarithmeticconcepts/antcomparisons.htm
	Measurement and Data Grade PK Standard 2 (PK.MD.2)	Sort objects into categories, count the number of objects in each category	Students should be able to count the number of objects in each category. (Limit category counts to less than or equal to 10)	Sort objects (M&M's, coins, etc) into separate piles of 1-10 objects. Then ask your child to count how many are in each category ("How many blue M&M's are there?").	http://www.education.com/activity/article/apple-tree-shape-match/ https://www.youtube.com/watch?v=JZF5wRXb3zg&feature=related
GEOMETRY					

Parent Notes	Standard Code	Standard	What does this standard mean?	What can I do at home?	Resources
	Geometry Grade PK Standard 1 (PK.G.1)	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as bottom, up, down, in front of, behind, over, under, and next to	Students should be able to describe the relative position of one object to another using proper vocabulary.	Ask your child to find different shapes they can identify in their room (or even the kitchen) Perhaps you have round or square shaped objects you can point to and have the child identify its shape.	https://www.youtube.com/watch?v=pfRuLS-Vnjs
	Geometry Grade PK Standard 2 (PK.G.2)	Correctly name shapes regardless of size	Students should know that the shapes of objects can be the same even if they are different in size.	Ask your child to make a book with 4 pieces of paper stapled together. They cut pictures from magazines and flue them on a page. For example, a tire on the circle page, a door on the rectangle page, a slice of pizza on the triangle page.	http://www.sesamestreet.org/videos?video=efb1c514-154e-11dd-8ea8-a3d2ac25b65b https://www.youtube.com/watch?v=PUu8vrPRrM4&feature=youtu.be

	Geometry Grade PK Standard 3 (PK.G.3)	Analyze, compare, and sort two- and three-dimensional shapes and objects, in different sizes, using informal language to describe their similarities, differences, and other attributes	Students should use color, size, and shape to compare and sort two and three-dimensional objects into groups that are the same.	Ask your child to sort objects into different groups based on color or shape.	https://www.youtube.com/watch?v=fpIWhwQUhkQ https://www.youtube.com/watch?v=duvjNmKUSac
	Geometry Grade PK Standard 4 (PK.G.4)	Create and build shapes from components	Students should build shapes using multiple materials such as sticks and clay.	Ask your child to make a new shape (a house) from a triangle and a square or rectangle.	http://www.education.com/activity/article/chocolate-chip-shape-cookies/