

Connections to Pennsylvania State Math Standards: Grade Pre- K

Exhibit Module	Airplane	Airplane Shooter	Amazing Airways	Archimedes Screw	Bernoulli Fountain	Blue Screen	Brain Quiz	Catenary Arch	Crackle Screen	Echo Tube	Erosion Table	Gear Wall	Hurricane Chamber	Kapla Blocks	Laser Guitar	Lego Table	Magnet Wall	Peakaboo Window	PVC Pipe Organ	Rhythm machine	Steam Table	Video Browser	Water Table/Tide Pool
Academic Content Standards Benchmarks Grade Pre- K																							
Numbers, Number Systems and Number Relationships																							
Use counting and numbers as part of play and as a means for determining quantity		X	X		X	X	X	X			X	X	X	X	X	X	X		X	X	X		X
Rote count to 20		X	X		X	X	X	X			X	X	X	X	X	X	X		X	X	X		X
Count up to 10 objects using one to one correspondence			X		X	X	X	X				X		X		X	X				X		
Name numerals to 10						X	X	X					X				X			X			
Use vocabulary to compare numbers of objects with teacher support		X	X			X	X	X				X	X	X	X	X	X		X	X			
Understand number concepts, vocabulary, quantities and written numerals in meaningful ways	X	X	X	X	X	X	X	X				X	X	X		X	X		X	X			
Differentiate numerals from letters							X	X				X	X	X		X	X			X			
Practice combining, separating and naming quantities			X			X		X				X		X		X	X				X		X
Match a numeral to a set 0 to 5						X	X	X												X			
Use ordinal number words to describe the position of objects (first, second, last)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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Solve oral word problems using concrete objects with assistance	X	X	X		X	X	X	X	X		X	X	X	X		X	X			X	X		X
Visually quantify one to three objects		X	X		X		X	X			X	X		X		X	X		X	X			
Sort objects by two or more attributes			X					X			X			X		X	X			X			X
Computation and Estimation																							
Solve problems using manipulatives to correspond to given number 1 to 6		X	X				X	X				X		X		X	X		X	X			
Make estimates of a set of objects up to 6		X	X	X	X	X	X				X	X		X		X	X			X			
Practice checking estimates		X	X	X	X	X	X				X	X		X		X	X			X			
Engage in number conservation experiences						X	X							X		X	X			X			
Practice using standard and nonstandard measures in everyday situations	X	X	X					X						X		X							
Group objects according to common properties			X					X			X			X		X	X			X	X		X
Develop an awareness of seriation through comparison of attributes																							
Practice using measurement vocabulary with adult support		X	X					X				X		X		X							

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Probability and Predictions																							
Predict the probability of an event occurring based on observation and prior knowledge with scaffolding	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Complete a simple yes/no graph to make a selection with assistance		X	X		X	X	X	X			X	X		X	X	X				X	X		X
Algebra and Functions																							
Practice and count using numbers as a means of determining quantity		X	X		X	X	X	X			X	X	X	X	X	X	X		X	X	X		X
Practice using concrete objects to portray simple story	X	X						X		X				X		X		X		X		X	
Identify and describe patterns		X	X	X	X						X	X		X	X	X	X			X			
Recognize and extend simple patterns		X	X	X	X						X	X		X	X	X	X			X			
Geometry																							
Identify and name simple three dimensional shapes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Replicate simple three-dimensional shapes		X	X					X				X		X		X	X						
Determine the attributes of basic shapes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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Observe symmetry	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Create a symmetrical design from a model		X						X				X		X		X							
Practice using directionality and appropriate vocabulary with assistance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Demonstrate an understanding of directionality, order and positions of objects	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X