

PreK Mathematics Guiding Document

Long-term Transfer Goal(s):

Long-term aims of the PreK program. An overall end result of a student's education in Madison.

Students will be able to independently use their learning in new situations to....

1. Understand counting and cardinality (M Strand A)
 - Analyzing
 - Product Creation
2. Understand and describe relationships to solve problems (M Strand B)
 - Analyzing
 - Decision Making
 - Self-Awareness
3. Understand the attributes and relative property of objects (Measurement & Data) (M Strand C)
 - Analyzing
 - Inquiry
 - Product Creation
4. Understand shapes and spatial relationships (M Strand D)
 - Analyzing
 - Product Creation

Domain: Mathematics		
Sub-Domain and Standards:	Understandings:	Essential Questions:
Counting & Cardinality M.60.1 Say or sign the number sequence up to at least 20 M.60.2 Count up to 10 objects using one-to-one correspondence, regardless of configuration, using the number name of the last object counted to represent the total number of objects in a set M.60.3 Count out a set of objects up to five M.60.4 Recognize written numerals up to at least 10 M.60.5 Quickly recognize and name, without counting, the number of objects in collections of up to at least five items M.60.6 Compare sets of up to 10 objects using a visual matching or counting strategy and describing the comparison as more, less than or the same	1. Mathematicians can identify how many in a set of objects. 2. Mathematicians can compare sets. 3. Numerals have specific names.	• How do I determine “how many”? (U1) • How do I compare sets? (U2) • How does counting help us in our everyday lives? (U1, U2 and U3) • What are my strategies for identifying numerals? (U3)

Domain: Mathematics		
Sub-Domain and Standards:	Understandings:	Essential Questions:
Operations & Algebraic Thinking M.48.7 Understand that adding to (or taking away) one or more objects from a group will increase or decrease the objects in the group M.60.7 Use real-world situations and concrete objects to model and solve addition (e.g., putting together) and subtraction (e.g., taking away) problems up through five M.60.8 Recognize and describe parts contained in larger numbers by composing number combinations up to at least five (e.g., recognize how many have been secretly taken away from a group of five objects)	1. Mathematicians use manipulatives to solve problems. 2. Mathematicians use knowledge of sets of objects to compose and decompose numbers.	• How can I use objects to demonstrate my math understanding? (U1 and U2) • How does math help me in my everyday life? (U1 and U2)

Domain: Mathematics		
Sub-Domain and Standards:	Understandings:	Essential Questions:
Measurement: M.60.9 Compare the measurable attributes of two or more objects (e.g., length, weight and capacity) and describe the comparison using appropriate vocabulary (e.g., longer, shorter, same length, heavier, lighter, same weight, holds more, holds less, holds the same amount) M.60.10 Begin to use strategies to determine measurable attributes (e.g., length or capacity of objects). May use comparison, standard or non-standard measurement tools M.60.11 Represent data using a concrete object or picture graph according to one attribute M.60.12 Sort and classify a set of objects on the basis of one attribute independently and describe the sorting rule. Can re-sort and classify the same set of objects based on a different attribute	1. Mathematicians sort and compare measurable attributes of objects. 2. Mathematicians use tools to measure attributes. 3. Mathematicians represent data.	• What are my strategies for comparing and describing objects? (U1) • How do I use tools to measure? (U2) • How do I represent my data? (U3)

Domain: Mathematics		
Sub-Domain and Standards:	Understandings:	Essential Questions:
Geometry and Spatial Sense M.60.13 Use relational vocabulary of proximity (e.g., beside, next to, between, above, below, over and under) to identify and describe the location of an object M.48.12 Identify 2-dimensional shapes (starting with familiar shapes such as circle and triangle) in different orientations and sizes M.60.15 Complete a shape puzzle or a new figure by putting multiple shapes together with purpose	1. Words can be used to describe locations of objects. 2. Shapes can be named and described. 3. Shapes can be combined to create new designs.	• How can I tell someone where something is? (U1) • How can I identify a shape? (U2) • How do shapes help me explain the world around me? (U2) • How can I use shapes to make something? (U3)