Mathematics Standards and Elements

Date Taught				Standards/Elements -Kindergarten
				Numbers and Operations
				MKN1. Students will connect numerals to the quantities they represent.
				a. Count a number of objects up to 30.
				b. Produce models for number words through ten.
				c. Write numerals through 20 to label sets.
				d. Sequence and identify using ordinal numbers (1st-10th).
				e. Compare two or more sets of objects (1-10) and identify which set is equal to, more than, or less than the other.
				f. Estimate quantities using five and ten as a benchmark. (e.g. 9 is one five and four more. It is closer to two fives or one 10 than it is to one five.).
				g. Use informal strategies to share objects equally (divide) between two to three people or sets.
				h. Identify coins by name and value (penny, nickel, dime, and quarter).
				i. Count out pennies to buy items that together cost less than 30 cents.
				j. Make fair trades involving combinations of pennies and nickels or pennies and dimes.
				MKN2. Students will use representations to model addition and subtraction.
				a. Use counting strategies to find out how many items are in two sets when they are combined, separated, or compared.
				b. Build number combinations up to 10 (e.g., 4 and 1, 2 and 3, 3 and 2, 4 and 1 for five) and for doubles to 10 (3 and 3 for six).
				c. Use objects, pictures, numbers, or words to create, solve and explain story problems (combining, separating, or comparing) for two numbers that are each less than 10.
				Measurement
				MKM1. Students will group objects according to common properties such as longer/shorter, more/less, taller/shorter, and heavier/lighter.
				a. Compare and order objects on the basis of length.
				b. Compare and order objects on the basis of capacity.
				c. Compare and order objects on the basis of height.

				d. Compare and order objects on the basis of weight.
				MKM2. Students will understand the measurement of calendar time.
				a. Know the names of the days of the week.
				b. Know the months of the year.
				c. Know the four seasons.
				MKM3. Students will tell time as it relates to a daily schedule.
				a. Order daily events.
				b. Tell the time when daily events occur, such as morning, afternoon, and night.
				c. Know the name of the day of the week when weekly events occur in class.
				Geometry
				MKG1. Students will correctly name simple two and three-dimensional figures, and recognize them in the environment.
				a. Recognize and name the following basic two-dimensional figures: triangles, rectangles, squares, and circles.
				b. Recognize and name the following three-dimensional figures: spheres (balls), and cubes.
				c. Observe concrete objects in the environment and represent the objects using basic shapes, such as drawing a representation of a house using a square together with a triangle for the roof.
				d. Combine basic shapes into basic and more complicated shapes, and will decompose basic shapes into combinations of basic shapes.
				e. Compare geometric shapes and identify similarities and differences of the following two and three-dimensional shapes: triangles, rectangles, squares, circles, spheres, and cubes.
				MKG2. Students will understand basic spatial relationships.
				a. Identify when an object is beside another object, above another object, or below another object.
				b. Identify when an object is in front of another object, behind another object, inside another object or outside it.
				MKG3. Students will identify, create, extend, and transfer patterns from one representation to another using actions, objects, and geometric shapes.
				a. Identify a missing shape within a given pattern of geometric shapes.
				b. Extend a given pattern, and recognize similarities (such as color, shape, texture, or number) in different patterns.

				Data Analysis and Probability
				MKD1. Students will pose information questions, collect data, organize, and record results using objects, pictures, and picture graphs.
				Process Standards
				MKP1. Students will solve problems (using appropriate technology).
				a. Build new mathematical knowledge thorough problem solving.
				b. Solve problems that arise in mathematics and in other contexts.
				c. Apply and adapt a variety of appropriate strategies to solve problems.
				d. Monitor and reflect on the process of mathematical problem solving.
				MKP2. **Students will reason and evaluate mathematical arguments.**
				a. Recognize reasoning and proof as fundamental aspects of mathematics.
				b. Make and investigate mathematical conjectures.
				c. Develop and evaluate mathematical arguments and proofs.
				d. Select and use various types of reasoning and methods of proof.
				MKP3. **Students will communicate mathematically.**
				a. Organize and consolidate their mathematical thinking through communication.
				b. Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.
				c. Analyze and evaluate the mathematical thinking and strategies of others.
				d. Use the language of mathematics to express mathematical ideas precisely.
				MKP4. Students will make connections among mathematical ideas and to other disciplines.
				a. Recognize and use connections among mathematical ideas.
				b. Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.
				c. Recognize and apply mathematics in contexts outside of mathematics.
				MKP5. Students will represent mathematics in multiple ways.
				a. Create and use representations to organize, record, and communicate mathematical ideas.

				b. Select, apply, and translate among mathematical representations to solve problems.
				c. Use representations to model and interpret physical, social, and mathematical phenomena.

Terms/Symbols to be taught explicitly:
numbers through 30, set, longer, shorter, heavier, lighter, morning, afternoon, evening, yesterday, today, tomorrow, days of the week, months of the year, seasons, triangle, rectangle, square, circle, sphere, cube, beside, above, below, in front of, behind, inside, outside, more, less, equal.