| **Upon graduation an Assumption Parish School student will:** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Add, subtract, multiply, and divide whole numbers, decimals, fractions, and rational numbers | | | | | | | | | | |
| 2. Apply computational skills to problem solving situations. | | | | | | | | | | |
| 3. Demonstrate telling time and making change. | | | | | | | | | | |
| 4. Recognize and apply proper math vocabulary. | | | | | | | | | | |
| 5. Apply math skills in the world around them. | | | | | | | | | | |
| 6. Employ technology to assist in math computation. | | | | | | | | | | |
| 7. Measure and convert within the standard and metric measurement system. | | | | | | | | | | |
| 8. Identify geometric shapes and terms as well as determine their volume, area, perimeter, and circumference. | | | | | | | | | | |
| 9. Compute percentages to apply to everyday life. | | | | | | | | | | |
| 10. Interpret data from various types of graphs. | | | | | | | | | | |
| 11. Construct graphs to represent data. | | | | | | | | | | |
| 12. Determine probability of events and odds in favor of and against an event. | | | | | | | | | | |
| 13. Identify and memorize basic pre-algebra concepts. | | | | | | | | | | |
| 14. Formulate and solve algebraic equations. | | | | | | | | | | |
| 15. Apply algebraic skills to real life problem solving situations. | | | | | | | | | | |
| **Understand numbers, representation, relationships, systems** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Count with understanding & recognize "how many" | | | | | | | | | | |
| Use models to develop place value and the base-ten system | | | | | | | | | | |
| Understand position and magnitude of ordinal & cardinal numbers | | | | | | | | | | |
| Develop whole numbers: relating, composing, decomposing #s | | | | | | | | | | |
| Connect number words and numerals to quantities they represent | | | | | | | | | | |
| Understand and represent common fractions: 1/2, 1/4, 1/3 | | | | | | | | | | |
| Understand place value and compare whole #s and decimals | | | | | | | | | | |
| recognize equivalent expressions and generate them | | | | | | | | | | |
| Develop understanding of fractions as parts of whole | | | | | | | | | | |
| Use models to judge the size of fractions | | | | | | | | | | |
| Recognize & generate equivalent fractions, decimals, & percents | | | | | | | | | | |
| Explore numbers less than 0 by extending the number line | | | | | | | | | | |
| Describe classes of numbers by characteristics,i.e. their factors | | | | | | | | | | |
| Solve problems with fractions, decimals, and percents | | | | | | | | | | |
| Compare & order fractions, decimals, & percents & on numberline | | | | | | | | | | |
| Develop meaning for percents >100 and <1 | | | | | | | | | | |
| Understand & use ratios & proportions to show relationships | | | | | | | | | | |
| Use exponential, sicentific, and calculator notation | | | | | | | | | | |
| Use factors, multiples, prime factoring, relative primes to prob solv | | | | | | | | | | |
| Develop meaning for integers; represent & compare quantities | | | | | | | | | | |

| **Understand meanings of operations and their relationships** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Meanings & relationships of whole number addition & subtraction | | | | | | | | | | |
| Understand effectsof adding and subtracting whole numbers | | | | | | | | | | |
| Understand situations involving multiplication and division | | | | | | | | | | |
| Understand meanings of multiplication and division | | | | | | | | | | |
| Understand effects of multiplying and dividing whole numbers | | | | | | | | | | |
| Relationships between operations, i.e. division as inverse of mult. | | | | | | | | | | |
| Use properties of operations, i.e. distributivity of mult. over addition | | | | | | | | | | |
| Understand arithmetic operations with fractions, decimals, & integers | | | | | | | | | | |
| Use associative and commutative and distributive in computation | | | | | | | | | | |
| Use inverse relationships and squaring to find square roots & prob solv | | | | | | | | | | |
| **NUMBER OPERATIONS** | | | | | | | | | | |
| **Compute fluently and make reasonable estimates** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strategies for whole-number computation, focus on addition & subt. | | | | | | | | | | |
| Develop fluency with basic add. & subt. number combinations | | | | | | | | | | |
| Use variety to compute: objects, mental math, estimation, paper & pencil, calculator | | | | | | | | | | |
| Develop fluency with basic mult. & div. number combinations and mental math(30x50) | | | | | | | | | | |
| Develop fluency in adding, subtracting, multiplying, and dividing whole numbers | | | | | | | | | | |
| Strategies to estimate whole-number computations and reasonableness of answers | | | | | | | | | | |
| Strategies to estimate fraction and decimal computation in situations of student experience | | | | | | | | | | |
| Use visual models and equivalent forms to add & subt common fractions and decimals | | | | | | | | | | |
| Select whole number & fraction computation tools:mental math, estimation, calculator, paper… | | | | | | | | | | |
| Select fraction & decimal computation tools:  mental math, estimation, calulator, … | | | | | | | | | | |
| Develop & analyze algorithms to compute fractions, decimals, & integers | | | | | | | | | | |
| Develop & analyze algorithms to compute rational-number and judge reasonableness of answers | | | | | | | | | | |
| Develop, analyze, & explain problem solving for proportions, i.e. scaling, & equivalent ratios | | | | | | | | | | |
| **ALGEBRA** | | | | | | | | | | |
| **Understand patterns, relations, and functions** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Sort, classify, & order objects by size, number, & other properties | | | | | | | | | | |
| Recognize, describe, & extend patterns; translate one representation to another | | | | | | | | | | |
| Analyze how repeating and growing patterns are generated | | | | | | | | | | |
| Describe, extend, and make generalizations about geometric & numeric patterns | | | | | | | | | | |
| Represent & analyze patterns & functions, using words, tables, & graphs | | | | | | | | | | |
| Represent & analyze patterns & functions, using symbolic rules | | | | | | | | | | |
| Relate and compare different forms of representation for a relationship | | | | | | | | | | |
| Identify functions as linear of nonlinear and contrast properties from graphs, equations | | | | | | | | | | |
| **Represent & analyze math situations & structures with algebraic symbols** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Illustrate principles & propertites of operations, such as commutativity, using numbers | | | | | | | | | | |
| Use concrete, pictorial, and verbal representations to develop symbolic notations | | | | | | | | | | |
| Identify properties as community, associativity, and distributivity to compute whole #s | | | | | | | | | | |
| Represent a variable as an unknown quantity using a letter or a symbol | | | | | | | | | | |
| Express mathematical relationships using equations | | | | | | | | | | |
| Develop an initial conceptual understanding of different uses of variables | | | | | | | | | | |
| Explore relationships between symbolic expressions & graphs of lines, intercept, slope | | | | | | | | | | |
| Use symbolic algebra to represent situations to solve problems, esp. linear relationships | | | | | | | | | | |
| Recognize & generate equivalent forms for simple alg expr and solve linear equations | | | | | | | | | | |

| **Use mathematical models to represent & understand quantitative relationships** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Model situations that involve addition & subtraction of whole numbers using objects,… | | | | | | | | | | |
| Model problem situations with objects & use representations: graphs, tables, equations | | | | | | | | | | |
| Model & solve contextualized problems with represenations: graphs, tables, equations | | | | | | | | | | |
| **Analyze change in various contexts** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Describe qualitative change, such as a student's growing taller | | | | | | | | | | |
| Describe quantitative change, such as a student's growing 2 inches in one year | | | | | | | | | | |
| Investigate how change in one variable relates to change in a second variable | | | | | | | | | | |
| Identify & describe situations with constant or varying rates of change & compare them | | | | | | | | | | |
| Use graphs to analyze the nature of changes in quantities in linear relationships | | | | | | | | | | |
| **GEOMETRY** | | | | | | | | | | |
| **Analyze characteristics & properties of 2 & 3 dimensional shapes and develop mathematical arguments about geometric relationships** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Recognize, name, build, draw, compare, and sort 2 & 3 dimensional shapes | | | | | | | | | | |
| Describe attributes and parts of 2 & 3 dimensional shapes | | | | | | | | | | |
| Investigate & predict results of putting together and taking apart 2&3 dim shapes | | | | | | | | | | |
| Identify, compare, & analyze attributes of 2&3 dim shapes and develop vocabulary | | | | | | | | | | |
| Classify 2&3 dim shapes according to properties, i.e. triangles, pyramids… | | | | | | | | | | |
| Investigate & reason bout subdividing, combining, & transforming shapes | | | | | | | | | | |
| Explore congruence and similarity | | | | | | | | | | |
| Make & test conjectures about geometric properties and relationships | | | | | | | | | | |
| and develop logical arguments to justify conclusions | | | | | | | | | | |
| Precisely describe, classify, & understand relationships among 2&3 dim objects | | | | | | | | | | |
| Understand relationships of angles, sides, perimeters, areas, & volumes in similarity | | | | | | | | | | |
| Create & critique inductive & deductive arguments: congruence, similarity, and | | | | | | | | | | |
| the Pythagorean theorem | | | | | | | | | | |
| **Specify locations & describe spatial relationships using coordinate geometry and other representational systems** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Describe recognize name, build, draw, compare, & sort 2&3 dimensional shapes | | | | | | | | | | |
| Describe, name, and interpret direction & distance in navigating space and apply | | | | | | | | | | |
| ideas about direction and distance | | | | | | | | | | |
| Find and name locations with simple relationships: "near to," maps, coordinate sys | | | | | | | | | | |
| Describe location & movement using common language & geometric vocabulary | | | | | | | | | | |
| Make & use coordinate systems to specify locations & describe paths | | | | | | | | | | |
| Find distance between points along horizontal & vertical lines of a coordinate sys | | | | | | | | | | |
| Use coordinate geometry to represent and examine properties of geom shapes | | | | | | | | | | |
| Use coordinate geometry to examine spacial geom shapes: regular polygons | | | | | | | | | | |
| **Apply transformations & use symmetry to analyze mathematical situations** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Recognize and apply slides, flips, and turns | | | | | | | | | | |
| Recognize and create shapes that have symmetry | | | | | | | | | | |
| Predict & describe results of sliding, flipping, and turning 2 dimensional objects | | | | | | | | | | |
| Describe a motion or series of motions that will show 2 shapes are congruent | | | | | | | | | | |
| Identify & describe line & rotational symmetry in 2&3 dimensional shapes & design | | | | | | | | | | |
| Describe sizes, positions, & orientations of shapes: flips, turns, slides, scaling | | | | | | | | | | |
| Examine congurence, similarity, & line or rotational symmetry in transformations | | | | | | | | | | |

| **Use visualization, spacial reasoning, & geometric modeling to solve prob** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Create mental images of geom shapes using spacial memory & visualization | | | | | | | | | | |
| Recognize& represent shapes from different perspectives | | | | | | | | | | |
| Relate ideas in geometry to ideas in number & measurement | | | | | | | | | | |
| Recognize geom shapes & structures in the environment & specify their location | | | | | | | | | | |
| Build & draw geometric objects | | | | | | | | | | |
| Create & describe mental images of objects, patterns, and paths | | | | | | | | | | |
| Identify & build a 3-dim object from 2-dim representations of that object | | | | | | | | | | |
| Use geom models to solv prob in other areas of math, i.e. number, measurement | | | | | | | | | | |
| Recognize geom ideas & relationships & apply to classroom or everyday life prob | | | | | | | | | | |
| Draw geom objects w specified prop, such as side lengths or angle measurements | | | | | | | | | | |
| Use 2-dim representations of 3-dim objects to visualize & prob solv: surface area,vol | | | | | | | | | | |
| Use visual tools such as networks to represent & solve problems | | | | | | | | | | |
| Use geom models to represent & explain numerical & algebaic relationships | | | | | | | | | | |
| Recognize & apply geometric ideas & relationships in areas outside the classroom | | | | | | | | | | |
| such as in art, science, and everyday life | | | | | | | | | | |
| **MEASUREMENT** | | | | | | | | | | |
| **Understand measurable attributes of objects & the units, systems, and processes of measurements** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Recognize attributes of length, volume, weight, area, & time | | | | | | | | | | |
| Compare & order objects according to these attributes | | | | | | | | | | |
| Understand how to measure using nonstandard & standard units | | | | | | | | | | |
| Select an appropriate unit & tool for the attribute being measured | | | | | | | | | | |
| Understand attributes such as length, area, weight, volume, & size of | | | | | | | | | | |
| of angle and select the appropriate type of unit for measuring | | | | | | | | | | |
| Understand need for measuring with standard units and become familiar | | | | | | | | | | |
| with standard units in the customary and metric systems | | | | | | | | | | |
| Carry out simple unit conversions within a measurement system | | | | | | | | | | |
| Understand that measurements are approximations & how differences | | | | | | | | | | |
| affect precision | | | | | | | | | | |
| Explore what happens to 2-dim shape measurements such as | | | | | | | | | | |
| perimeter and area when the shape is changed in some way | | | | | | | | | | |
| Understand both metric and customary systems of measurement | | | | | | | | | | |
| Understand relationships among units, convert units within a system | | | | | | | | | | |
| Understand, select, & use units of appropriate size & type to measure | | | | | | | | | | |
| angles, perimeter, area, surface area, and volume | | | | | | | | | | |

| **Apply appropriate techniques, tools, & formulas to determine meas** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| Measure with multiple copies of the same size unit, i.e. paper clips… | | | | | | | | | |
| Use repetition of a single unit to measure something larger than the unit | | | | | | | | | |
| i.e. measuring length of a room with a single meterstick | | | | | | | | | |
| Use tools to measure | | | | | | | | | |
| Develop common referents for measures to make comparisons & estimate | | | | | | | | | |
| Develop strategies to estimate perimeters, areas, & vol of irregular shape | | | | | | | | | |
| Select & apply appropriate standatd units & tools to measure length, | | | | | | | | | |
| area, volume, weight, time, temperature, and the size of angles | | | | | | | | | |
| Select & use benchmarks to estimate measurements | | | | | | | | | |
| Develop, understand, and use formulas to find areas of rectangles, | | | | | | | | | |
| and related triangles and parallelograms | | | | | | | | | |
| Develop strategies to determine surf area & vol of rectangular solids | | | | | | | | | |
| Use common benchmarks to select appropriate methods to estimate meas | | | | | | | | | |
| Select & apply techniques & tools to accurately find length, area, volume | | | | | | | | | |
| and angle measures to appropriate levels of precision | | | | | | | | | |
| Develop & use formulas to determine circumferences, area of triangles, | | | | | | | | | |
| parallelograms, trapezoids, and circles and more complex shapes | | | | | | | | | |
| Develop strategies to determine surf area a & vol of selected prisms, | | | | | | | | | |
| pyramids, and cylinders | | | | | | | | | |
| Solve problems involving scale factors, using ratio and proportion | | | | | | | | | |
| Solve simple problems with rates & derived meas: velocity, density… | | | | | | | | | |

| **DATA AND PROBABILITY**<br>**Formulate questions that can be addressed with data and collect**<br>**organize, and display relevant data to answer them** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Pose questions & gather data about themselves & their surroundings | | | | | | | | | | |
| Sort & classify objects according to attributes & organize data about them | | | | | | | | | | |
| Represent data using concrete objects, pictures, and graphs | | | | | | | | | | |
| Design investigations to address a question & consider how data-collection | | | | | | | | | | |
| methods affect the nature of the data set | | | | | | | | | | |
| Collect data using observations, surveys, and experiments | | | | | | | | | | |
| Represent data using tables & graphs: line plots, bar graphs, line graphs… | | | | | | | | | | |
| Recognize differences in representing categorical & numerical data | | | | | | | | | | |
| Formulate questions, design studies, and collect data about a characteristic | | | | | | | | | | |
| shared by two populations or different characteristics within a population | | | | | | | | | | |
| Select, create, and use appropriate graphical representations of data, | | | | | | | | | | |
| including histograms, box plots, and scatterplots. | | | | | | | | | | |

| **Select & use appropriate statistical methods to analyze data** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Describe parts of the data & the set of data as a whole to interpret the data | | | | | | | | | | |
| Describe the shape & important features of a set of data and compare related | | | | | | | | | | |
| data sets, with an emphasis on how the data are distributed | | | | | | | | | | |
| Use measures of center (focus on median) & understand what each does and | | | | | | | | | | |
| does not indicate about the data set | | | | | | | | | | |
| Compare different representations of the same data & evaluate how well each | | | | | | | | | | |
| representation shows important aspects of the data | | | | | | | | | | |
| Find, use, & interpret meas of center & spread: mean, interquartile range | | | | | | | | | | |
| Discuss & understand correspondence between data sets and their | | | | | | | | | | |
| graphical symbols: histograms, stem&leaf plots, box plots, scatterplots | | | | | | | | | | |
| **Develop & evaluate inferences & predictions based on data** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Discuss events related to students' experiences as likely or unlikely | | | | | | | | | | |
| Propose & justify conclusions & predictions based on data & design studies | | | | | | | | | | |
| to further investigate the conclusions or predictions | | | | | | | | | | |
| Use observations about difference between 2 or more samples to make | | | | | | | | | | |
| conjectures about the populations from which samples were taken | | | | | | | | | | |
| Make conjectures about possible relationships between 2 characteristics | | | | | | | | | | |
| of a sample from scatterplots of data and lines of fit | | | | | | | | | | |
| Use conjectures to formulate new questions & plan new studies to answer | | | | | | | | | | |
| **Understand & apply basic concepts of probability** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Describe events as likely or unlikely :certain, equally likely, impossible | | | | | | | | | | |
| Predict the probability of outcomes of simple experiments & test predictions | | | | | | | | | | |
| Understand measure of likelihood of an event represented by a # from 0 to 1 | | | | | | | | | | |
| Understand & use appropriate terminology to describe complementary and | | | | | | | | | | |
| mutually exclusive events | | | | | | | | | | |
| Use proportionality & understanding of probability to make & test conjectures | | | | | | | | | | |
| about the results of experiments and simulations | | | | | | | | | | |
| Compute probabilities for simple compound events, using such methods as | | | | | | | | | | |
| organized lists, tree diagrams, and area models | | | | | | | | | | |
| **PROBLEM SOLVING** | | | | | | | | | | |
| **Build new mathematical knowledge through problem solving** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Involve a variety of contexts from daily routines and stories | | | | | | | | | | |
| **Solve Problems that arise in mathematics & in other contexts** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Posing problems and generating new questions | | | | | | | | | | |
| Discuss, involving reflection and reasoning | | | | | | | | | | |
| Embed problems in the mathematics-content curriculum | | | | | | | | | | |
| Posing problems, designing procedures and solving the problem | | | | | | | | | | |
| **Apply and adapt a variety of appropriate strategies to solve problems** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Children's literature can set the context for problems | | | | | | | | | | |
| Students working together to solve problems | | | | | | | | | | |
| Use graphical representations to visualze problems | | | | | | | | | | |

| **Monitor & reflect on the process of mathematicial problem solving** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Assessment: verbal, performance, paper and pencil | | | | | | | | | | |
| Class as a whole is continually developing and applying conjectures | | | | | | | | | | |
| Teachers motivate by encouraging communication and collaboration | | | | | | | | | | |
| **REASONING AND PROOF** | | | | | | | | | | |
| **Recognize reasoning and proof as fundamental aspects of mathematics** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Students are encouraged to make conjectures & given time to search for evidence | | | | | | | | | | |
| Students reason about shape, size, and relationships | | | | | | | | | | |
| | | | | | | | | | | |
| **Make and investigate mathematical conjectures** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Students explain their thinking in classroom conversation | | | | | | | | | | |
| Students are encouraged to make discoveries and talk about them | | | | | | | | | | |
| Examine patterns and structures to detect regularities. | | | | | | | | | | |
| **Develop and evaluate mathematical arguments and proofs** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Students are encouraged to put forth their own ideas for examination. | | | | | | | | | | |
| Understand relationships and properties. | | | | | | | | | | |
| Understand what a convincing mathematical argument is. | | | | | | | | | | |
| Formulate generalizations and conjectures about observed regularities | | | | | | | | | | |
| Evaluate conjectures | | | | | | | | | | |
| Construct and evaluated mathematical arguments. | | | | | | | | | | |
| **Select and use various types of reasoning and methods of proof** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Teacher's role of listening to student explanations is very important. | | | | | | | | | | |
| Teacher questioning is particularly important in developing reasoning. | | | | | | | | | | |
| Use inductive reasoning to search for mathematical relationships through patterns | | | | | | | | | | |
| The teacher's selection of student reasoning tasks is very important. | | | | | | | | | | |
| Use deductive reasoning to develop arguments also. | | | | | | | | | | |
| Teacher needs to assess and help students with their reasoning abilities. | | | | | | | | | | |
| **COMMUNICATION** | | | | | | | | | | |
| **Organize and consolidate mathematical thinking through communication.** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Teachers encourage students to reflect on class conversations | | | | | | | | | | |
| Use various problems & materials, including calculators & computer applications. | | | | | | | | | | |
| **Communicate mathematical thinking coherently and clearly to peers,** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **teachers, and others** | | | | | | | | | | |
| Students work in small groups. | | | | | | | | | | |
| Manipulate objects and draw pictures. | | | | | | | | | | |
| Teachers provide opportunities for student discussion. | | | | | | | | | | |
| Students work in pairs. | | | | | | | | | | |
| **Analyze and evaluate the mathematical thinking and strategies of others** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Student participation in classroom math discussion is furthered. | | | | | | | | | | |
| Students verbally interpret, justify, and conjecture. | | | | | | | | | | |
| Students reflect on their own understanding and on the ideas of others. | | | | | | | | | | |
| **Use the language of mathematics to express mathematical ideas precisely** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Use problems related to the children's experiences in their everyday life. | | | | | | | | | | |
| Students are required to write about their mathematical experiences. | | | | | | | | | | |
| Teachers help students build their mathematical vocabulary. | | | | | | | | | | |

| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| **CONNECTIONS** | | | | | | | | | | |
| **Recognize and use connections among mathematical ideas.** | | | | | | | | | | |
| Use concrete objects to make connections. | | | | | | | | | | |
| Equivalence and multiplicative reasoning need major emphasis. | | | | | | | | | | |
| **Understand how mathematical ideas interconnect & build on one another to produce a coherent whole** | | | | | | | | | | |
| Teachers have the responsibility to help children see connections. | | | | | | | | | | |
| Infer, measure, communicate, classify, and predict in the classroom. | | | | | | | | | | |
| Classroom conversation is very important. | | | | | | | | | | |
| **Recognize and apply mathematics in context outside of mathematics** | | | | | | | | | | |
| Use examples involving everyday events, i.e jumping rope in PE | | | | | | | | | | |
| Integrate work with other subject areas, i.e., science, social studies | | | | | | | | | | |
| Use teachable mathematical moments that arise in class. | | | | | | | | | | |
| Compare study results of groups within the class. | | | | | | | | | | |
| Teachers make connections from present work to previous topics. | | | | | | | | | | |
| **REPRESENTATIONS** | | | | | | | | | | |
| **Create and use representations to organize, record, and communicate mathematical ideas.** | | | | | | | | | | |
| Use physical objects such as fingers, language, drawings, diagrams, physical gestures, and symbols. | | | | | | | | | | |
| **Select, apply, and translate among mathematical representations to solve problems.** | | | | | | | | | | |
| Students are allowed to explain their represenations. | | | | | | | | | | |
| "What if" kinds of thinking should be furthered. | | | | | | | | | | |
| **Use representations to model and interpret physical, social, and mathematical phenomena.** | | | | | | | | | | |
| Teachers encourage student use of multiple representations. | | | | | | | | | | |
| Teachers' listening to students explanations is particularly important. | | | | | | | | | | |
| Students use geometry software and spreadsheets. | | | | | | | | | | |
| Teacher helps students develop confidence as well as competence. | | | | | | | | | | |
| **Use technology within math.** | **K** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
| Intregrate calculators in lesson plans. | | | | | | | | | | |
| Incorporate the use of the laptops in the Math classes | | | | | | | | | | |
| Incorporate the use of the smartboards in the Math classes | | | | | | | | | | |