

Math GLE's - Grade 3

Strand 1: Number and Operations

1. Understanding numbers, ways of representing numbers, relationships among numbers and number systems
 - A. Read, write and compare numbers: **MA 5 1.10 DOK 1**
 - Read, write and compare whole numbers up to *** 10,000**
 - B. Represent and use Rational Numbers: **MA 5 1.10 DOK 1**
 - Represents halves, thirds, and fourths
 - C. C. Compose and Decompose Numbers: **MA 1 1.6 DOK 2**
 - Recognize equivalent representations for the same number and generate them by decomposing and composing numbers including expanded notation
 - D. D. Classify and describe numeric relationships: **MA 5 1.6 DOK 1**
 - Classify numbers by their characteristics, including odd and even
2. Understand meanings of operations and how they relate to one another
 - A. Represent operations: **MA 1 1.10 DOK 2**
 - *** Represent/ model a given situation involving multiplication and related division using various models including sets, arrays, areas, repeated addition/subtraction, sharing and partitioning**
 - B. Describe effects of operations: **MA 1 1.10 DOK 2**
 - *Describe the effects of adding and subtracting whole numbers as well as the relationship between the two operations
 - C. Apply properties of operations:
 - *none
 - D. Apply operations on real and complex numbers: None

3. Compute fluently and make reasonable estimates

A. Describe or represent mental strategies: **MA 1 3.2 DOK 2**

- * represent a mental strategy used to compute a given multiplication problem up to 9×9

B. Develop and demonstrate fluency: **MA 1 1.6 DOK 1**

- *use strategies to develop fluency with basic number relationships (9×9) of multiplication and division

C. Compute problems: **MA 1 3.2 DOK 2**

- * apply and describe the strategy used to compute up to 3 digit addition or subtraction problems

D. Estimate and justify solutions: **MA 1 3.2 DOK 3**

- *Estimate and justify sums and differences of whole numbers

E. Use proportional reasoning: None

Strand 2: Algebraic Relationships

1. Understand patterns, relations and functions

A. Recognize and extend patterns: **MA 4 1.6 DOK 2**

- Extend geometric (shapes) and numeric patterns to find the next term

B. Create and analyze patterns: **MA 4 1.6 DOK 2**

- Represent patterns using words, tables or graphs

C. Classify objects and representations: None

D. Identify and compare functions: None

- E. Describe the effects of parameter changes: None
2. Represent and analyze mathematical situations and structures using algebraic symbols
- A. Represent mathematical situations: **MA 4 1.10 DOK 2**
- ***using all operations, represent a mathematical situation as an expression or number sentence**
- B. Describe and use mathematical manipulation: **MA 4 3.2 DOK 2**
- ***use the commutative, distributive and associative properties for basic facts of whole numbers**
- C. Utilize equivalent forms: None
- D. Utilize systems: None
3. Use mathematical models to represent and understand quantitative relationships
- A. Use mathematical models: **MA 4 1.6 DOK 2**
- model problem situations, including multiplication with objects or drawings
4. Analyze change in various contexts
- A. Analyze change: **MA 4 1.6 DOK 2**
- Describe quantitative change, such as students growing two inches in a year

Strand 3: Geometric and Spatial Relationships

1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.
- A. Describe and use geometric relationships: **MA 2 1.10 DOK 2**
- ***Compare and analyze 2- dimensional shapes by describing their attributes (circle, rectangle, rhombus, trapezoid, triangle)**
- B. Apply geometric relationships: None
- C. Compose and decompose shapes: **MA 2 1.6 DOK 3**
- Predict the results of putting together or taking apart 2-and 3-dimensional shapes
2. Specify locations and describe spatial relationships using coordinate geometry and other representational systems
- A. Use coordinate systems: **MA 2 1.10 DOK 2**

- Describe location using common language and geometric vocabulary (forward, back, left, right, north, south, east, west)
3. Apply transformations and use symmetry to analyze mathematical situations
 - A. Use transformations on objects: **MA 2 3.2 DOK 2**
 - Determine if two objects are congruent through a slide, flip or turn
 - B. Use transformations on functions: None
 Use symmetry: **MA 2 1.10 DOK 1**
 - identify lines of symmetry in polygons
 4. Use visualizations, spatial reasoning and geometric modeling to solve problems
 - A. Recognize and draw three dimensional representations: None
 - B. Draw and use visual models: None

Strand 4: Measurement

1. Understand measurable attributes of objects and the units, systems and processes of measurement.
 - A. Determine unit of measurement: **MA 2 3.1 DOK 3**
 - * identify, justify and use the appropriate unit of measure (linear, time, weight)
 - B. Identify equivalent measures: None
 - C. Tell and use units of time: **MA 2 1.10 DOK 1**
 - Tell time to the nearest five minutes
 - D. Count and compute money: **MA 1 1.10 DOK 2**
 - Determine change from \$5.00 and add and subtract money values to \$5.00
2. Apply appropriate techniques, tools and formulas to determine measurements
 - A. Use standard or non standard measurement: **MA 2 1.6 DOK 2**
 - Use a referent for measures to make comparisons and estimates
 - B. Use angle measurement: None
 - C. Apply geometric measurements: **MA 2 1.10 DOK 2**
 - Determine the perimeter of polygons

- D. Analyze precision: None
- E. Use relationships within a measurement system: None

Strand 5: Data and Probability

1. Formulate questions that can be addresses with data and collect, organize and display relevant data to answer them.
 - A. Formulate questions: **MA 3 1.2 DOK 3**
 - Design investigations to address a given question
 - B. Classify and organize data: None
 - C. Represent and interpret data: **MA 3 1.10 DOK 2**
 - Read and interpret information from line plots and graphs (bar, line, pictorial)
2. Select and use appropriate statistical methods to analyze data
 - A. Describe and analyze data: **MA 3 1.6 DOK 2**
 - Describe the shape of data and analyze it for patterns
 - B. Compare data representations: None
 - C. Represent data algebraically: None
4. Develop and evaluate inferences and predictions that are based on data.
 - A. Develop and evaluate inferences and predictions that are based on data: **MA 3 3.5 DOK 2**
 - Discuss events related to students' experiences as likely or unlikely
 - B. Analyze basic statistical techniques: None
5. Understand and apply basic concepts of probability
 - A. Apply basic concepts of probability: None
 - B. Use and describe compound events: None