Targets for Spiraling, Rationale, Structure - The MATH Edition

**Kindergarten**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **Counting and Cardinality (CC)**   * Know number names and the count sequence. * Count to tell the number of objects. * Compare numbers. |  |  |
| **Operations and Algebraic Thinking (OA)**   * Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from |  |  |
| **Number and Operations in Base Ten (NBT)**   * Work with numbers 11-19 to gain foundations for place value |  |  |
| **Measurement and Data (MD)**   * Describe and compare measureable attributes * Classify objects and count the number of objects in categories |  |  |
| **Geometry (G)**   * Identify and describe shapes * Analyze, compare, create and compose shapes |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 1**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **Operations and Cardinality (OA)**   * Represent and solve problems involving addition and subtraction. * Understand and apply properties of operations and the relationship between addition and subtraction. * Add and subtract within 20. * Work with addition and subtraction equations. |  |  |
| **Number and Operations in Base Ten (NBT)**   * Work with numbers 11-19 to gain foundations for place value. * Understand place value. * Use place value understanding and properties to add and subtract. |  |  |
| **Measurement and Data (MD)**   * Measure lengths indirectly and by iterating length units. |  |  |
| **Measurement and Data (MD)**   * Tell and write time. * Represent and interpret data. |  |  |
| **Geometry (G)**   * Reason with shapes and their attributes. |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 2**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention)** |
| **Operations and Algebraic Thinking (OA)**   * Represent and solve problems involving addition and subtraction. * Add and subtract within 20. |  |  |
| **Operations and Algebraic Thinking (OA)**   * Work with equal groups of objects to gain foundations for multiplication. |  |  |
| **Number and Operations in Base Ten (NBT)**   * Understand place value. * Use place value understanding and properties to add and subtract. |  |  |
| **Measurement and Data (MD)**   * Measure and estimate lengths in standard units. * Relate addition and subtraction to length. |  |  |
| **Measurement and Data (MD)**   * Work with time and money. * Represent and interpret data. |  |  |
| **Geometry (G)**   * Reason with shapes and attributes. |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 3**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **Operations and Algebraic Thinking (OA)**   * Represent and solve problems involving multiplication and division * Understand properties of multiplication and the relationship between multiplication and division. * Multiply and divide within 100. * Solve problems involving the four operations, and identify and explain patterns in arithmetic. |  |  |
| **Number and Operations in Base Ten (NBT)**   * Use place value understanding and properties of operations to perform multi-digit arithmetic |  |  |
| **Numbers and Operations - Fractions (NF)**   * Develop understanding of fractions as numbers. |  |  |
| **Measurement and Data (MD)**   * Solve problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects * Geometric measurement: understand concepts of area and relate area to multiplication and to addition. |  |  |
| **Measurement and Data (MD)**   * Represent and interpret data. * Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.. |  |  |
| **Geometry (G)**   * Reason with shapes and their attributes. |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 4**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **Operations and Algebraic Thinking (OA)**   * Use the four operations with whole numbers to solve problems. |  |  |
| **Operations and Algebraic Thinking (OA)**   * Gain familiarity with factors and multiples. * Generate and analyze patterns. |  |  |
| **Number and Operations in Base Ten (NBT)**   * Generalize place value understanding for multi-digit whole numbers. * Use place value understanding and properties of operations to perform multi-digit arithmetic. |  |  |
| **Numbers and Operations - Fractions (NF)**   * Extend understanding of fraction equivalence and ordering. * Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. * Understand decimal notation for fractions, and compare decimal fractions. |  |  |
| **Measurement and Data (MD)**   * Solve problems involving measurement and conversion of measurements from a larger unit to a small unit. * Represent and interpret data. * Geometric measurement: understand concepts of angle and measure angles. |  |  |
| **Geometry (G)**   * Draw and identify lines and angles, and classify shapes by properties of their lines and angles. |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 5**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **Operations and Algebraic Thinking (OA)**   * Write and interpret numerical expressions. * Analyze patterns and relationships. |  |  |
| **Number and Operations in Base Ten (NBT)**   * Understand the place value system. * Perform operations with multi-digit whole numbers and with decimals to hundredths. |  |  |
| **Numbers and Operations - Fractions (NF)**   * Use equivalent fractions as a strategy to add and subtract fractions. * Apply and extend previous understandings of multiplication and division to multiply and divide fractions. |  |  |
| **Measurement and Data (MD)**   * Convert like measurement units within a given measurement system. * Represent and interpret data. |  |  |
| **Measurement and Data (MD)**   * Geometric measurement: understand concepts of volume and relate volume to multiplication and addition. |  |  |
| **Geometry (G)**   * Graph points on the coordinate plane to solve real-world and mathematical problems. * Classify two-dimensional figures into categories based on their properties. |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 6**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **Ratio and Proportional Relationships (RP)**   * Understand ratio concepts and use ratio reasoning to solve problems. |  |  |
| **The Number System (NS)**   * Apply and extend previous understandings of multiplication and division to divide fractions by fractions. * Apply and extend previous understanding of numbers to the system of rational numbers. |  |  |
| **The Number System (NS)**   * Compute fluently with multi-digit numbers and find common factors and multiples |  |  |
| **Expressions and Equations (EE)**   * Apply and extend previous understandings of arithmetic to algebraic expressions. * Reason about and solve one-variable equations and inequalities. * Represent and analyze quantitative relationships between dependent and independent variables. |  |  |
| **Geometry (G)**   * Solve real-world and mathematical problems involving area, surface area, and volume. |  |  |
| **Statistics and Probability (SP)**   * Develop understanding of statistical variability. * Summarize and describe distributions. |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 7**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **Ratio and Proportional Relationships (RP)**   * Analyze proportional relationships and use them to solve real-world and mathematical problems. |  |  |
| **The Number System (NS)**   * Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers. |  |  |
| **Expressions and Equations (EE)**   * Use properties of operations to generate equivalent expressions. * Solve real-life and mathematical problems using numerical and algebraic expressions and equations. |  |  |
| **Geometry (G)**   * Draw, construct and describe geometrical figures and describe the relationships between them. * Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. |  |  |
| **Statistics and Probability (SP)**   * Use random sampling to draw inferences about a population. * Draw informal comparative inferences about two populations. * Investigate chance processes and develop, use, and evaluate probability needs. |  |  |

Targets for Spiraling, Rationale, Structure - The MATH Edition

**Grade 8**

|  |  |  |
| --- | --- | --- |
| **Cluster/Standard** | **What will be emphasized?**  ***Rationale for Spiraling*** | **Suggested**  **Intervention** |
| **The Number System (NS)**   * Know that there are numbers that are not rational, and approximate them by rational numbers |  |  |
| **Expressions and Equations (EE)**   * Work with radicals and integer exponents. * Understand the connections between proportional relationships, lines, and linear equations. * Analyze and solve linear equations and pairs of simultaneous linear equations. |  |  |
| **Functions (F)**   * Define, evaluate, and compare functions. * Use functions to model relationships between quantities. |  |  |
| **Geometry (G)**   * Understand congruence and similarity using physical models, transparencies, or geometry software. * Understand and apply the Pythagorean Theorem. |  |  |
| **Geometry (G)**   * Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. |  |  |
| **Statistics and Probability (SP)**   * Investigate patterns of association in bivariate data. |  |  |