## Mathletics

## Florida Program of Studies

 Activities

Grades 3-6
June, 2023

Mathletics
Florida Program of Studies
Classic Courses
June 2023
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## Grade 3

## Number Sense and Operations

| Understand the place value of four-digit numbers. |  |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| Course Topic |  |  |  |  | Activities Title |
| NSO - Place Value | Place Value - Thousands |  |  |  |  |
|  | Expanding Numbers |  |  |  |  |
|  | Understanding Place Value 1 |  |  |  |  |
|  | Place Value Partitioning |  |  |  |  |
|  | Understanding Place Value 2 |  |  |  |  |
|  | Place Value 3 |  |  |  |  |
|  | Partition and Rename 2 |  |  |  |  |
|  | Smallest and Largest Numbers |  |  |  |  |
|  | Ascending Order |  |  |  |  |
|  | Descending Order |  |  |  |  |
|  | Compare Numbers to 100 |  |  |  |  |
|  | Nearest Ten? |  |  |  |  |
|  | Nearest Hundred? |  |  |  |  |

MA.3.NSO. 2
Add and subtract multi-digit whole numbers. Build an understanding of multiplication and division operations.

| Course Topic | Activities Title |
| :---: | :---: |
| NSO - Addition \& Subtraction | Add 3-Digit Numbers |
|  | Add 3-Digit Numbers: Regroup |
|  | Add Multi-Digit Numbers 1 |
|  | Column Subtraction |
|  | 3-Digit Differences |
|  | 3-Digit Differences: 1 Regrouping |
|  | 3-Digit Differences: 2 Regroupings |
|  | Adding Colossal Columns |
| NSO - Multiplication \& Division 1 | Groups of Two |
|  | Groups of Three |
|  | Groups of Four |
|  | Groups of Five |
|  | Groups of Six |
|  | Groups of Seven |
|  | Groups of Eight |
|  | Groups of Nine |
|  | Groups of Ten |
|  | Arrays 1 |
|  | Multiplication Arrays |
|  | Frog Jump Multiplication |


|  | Multiply Multiples of 10 |
| :---: | :---: |
|  | Multiply More Multiples of 10 |
|  | Multiply: 1-Digit Number |
|  | Multiply: 1-Digit Number, Regroup |
|  | Multiply: 2-Digit by 1-Digit |
| NSO - Multiplication \& Division 2 | Dividing Threes |
|  | Dividing Fours |
|  | Dividing Fives |
|  | Dividing Sixes |
|  | Dividing Sevens |
|  | Dividing Eights |
|  | Dividing Nines |
|  | Dividing Tens |
|  | Problems: Times and Divide |
|  | Multiply \& Divide Problems 1 |

## Fractions

| MA.3. FR. 1 <br> Understand fractions as numbers and represent fractions. |  |
| :---: | :---: |
| Course Topic | Activities Title |
| FR - Represent and Interpret Fractions | Fractions of a Collection |
|  | What fraction Is Shaded 1 |
|  | Model Fractions |
|  | Identifying Fractions Beyond 1 |
|  | Part-whole rods 2 |

MA.3.FR. 2
Order and compare fractions and identify equivalent fractions.

| Course Topic |  |
| :--- | :--- |
| FR Comparing Fractions | Comparing Fractions 1 |
|  | Compare Fractions 1a |
|  | Compare Fractions 1b |
|  | The Equivalent Fraction Title |
|  | Equivalent Fraction Wall 1 |
|  | Equivalent Fraction Wall 2 |
|  | Shading Equivalent Fractions |

## Algebraic Reasoning

| MA.3.AR.2 |  |
| :---: | :--- |
| Develop an understanding of equality and multiplication and division. |  |
| Course Topic | Activities Title |
| AR - Solving Problems | Problems: Multiply and Divide |
|  | Fact Families: Multiply and Divide |
|  | Multiplication Turn-Abouts |
|  | Related Facts 2 |


| MA.3.AR.3 |  |
| :--- | :--- |
| Identify numerical patterns, including multiplicative patterns. |  |
| Course Topic | Activities Title |
| AR - Patterns | Odd or Even |
|  | Odd \& Even Numbers 1 |
|  | Multiples of |
|  | Increasing Patterns |
|  | Decreasing Patterns |
|  | Describing Patterns |

## Measurement

| MA.3.M. 1 |  |
| :---: | :---: |
| Course Topic | Activities Title |
| M - Units of Measurement \& Tools | Which Measuring Tool? |
|  | Filling Fast! |
|  | Using a Litre |
|  | Millilitres \& Litres |
|  | Cups, Pints, Quarts, Gallons |
|  | Measuring Length |
|  | How Long Is That (Customary)? |
|  | Which Unit of Measurement? |
|  | Centimetres \& Metres |
|  | Metres \& Kilometres |
|  | Inches, Feet, Yards |
|  | Everyday Mass |
|  | Mass Word Problems |
|  | What's the Temperature (Celsius)? |

## MA.3.M. 2

Tell and write time and solve problems involving time.

| Course Topic | Activities Title |
| :--- | :--- |
| - Time | What Is the Time? |
|  | Quarter To and Quarter Past |
|  | Five Minute Times |
|  | 24 Hour Time |
|  | Elapsed Time |
|  | What Time Will it Be? |
|  | Time Mentals |

## Geometric Reasoning

| MA.3.GR.1 |  |
| :--- | :--- |
| Describe and identify relationships between lines and classify quadrilaterals. |  |
| Course Topic |  |
| GR - Shapes | What Line Am I? |
|  | Collect the Shapes 1 |
|  | Collect the Shapes 2 |
|  | Symmetry or Not? |


| MA.3.GR. 2 <br> Solve problems involving the perimeter and area of rectangles. |  |
| :---: | :---: |
| Course Topic | Activities Title |
| GR - Perimeter \& Area | Equal Areas |
|  | Biggest Shape |
|  | Area of Shapes |
|  | Area of Shapes (inches, feet, yards) |
|  | Area of Squares and Rectangles |
|  | Perimeter |
|  | Perimeter: Squares and Rectangles |
|  | Perimeter of Shapes |
|  | Perimeter Detectives 1 |

## Data Analysis and Probability

| MA.3.DP.1 |  |
| :--- | :--- |
| Collect, represent and interpret numerical and categorical data. |  |
| Course Topic | Activities Title |
| DP - Statistical Data | Sorting Data/Analyzing Data (US) |
|  | Picture Graphs: with scale \& half symbols |
|  | Bar Graphs 2 |

## Grade 4

## Number Sense and Operations

| MA.4.NSO. 1 <br> Understand place value for multi-digit numbers. |  |
| :---: | :---: |
| Course Topic | Activities Title |
| NSO - Place Value | Which is Greater? |
|  | Which is Less? |
|  | Ascending Order |
|  | Descending Order |
|  | Smallest \& Largest Numbers |
|  | Partition and Rename 3/Understanding Place Value 3 (CAN) |
|  | Expanding Numbers |
|  | Expanded Notation |
|  | Numbers from Words to Digits 1 |
|  | Numbers from Words to Digits 2 |
|  | Place Value 1 ( $\times 10$ and $\div 10$ ) |
|  | Place Value 2 ( $\times 10$ and $\div 10$ ) |
|  | Nearest Hundred? |
|  | Nearest Thousand? |
|  | Rounding Numbers |
|  | Decimals from Words to Digits 1 |
|  | Decimal Place Value |
|  | Decimals on the Number Line |
|  | Decimal Order 1 |
|  | Comparing Decimals 1 |
|  | Comparing Decimals 2 |

MA.4.NSO. 2
Build an understanding of operations with multi-digit numbers including decimals.

| Course Topic | Activities Title |
| :---: | :---: |
| NSO - Operations 1 | Groups of Two |
|  | Groups of Three |
|  | Groups of Four |
|  | Groups of Five |
|  | Groups of Six |
|  | Groups of Seven |
|  | Groups of Eight |
|  | Groups of Nine |
|  | Groups of Ten |
|  | Division Facts to 12 |
|  | Division Facts 1 |
|  | Dividing Twos |
|  | Dividing Threes |


|  | Dividing Fours |
| :---: | :---: |
|  | Dividing Fives |
|  | Dividing Sixes |
|  | Dividing Sevens |
|  | Dividing Eights |
|  | Dividing Tens |
|  | Dividing Nines |
| NSO - Operations 2 | Multiply: 1-Digit Number |
|  | Multiply: 1-Digit Number, Regroup |
|  | Multiply 2 Digits Area Model |
|  | Long Multiplication |
|  | Divide: 1-Digit Divisor 1 |
|  | Divide: 1-Digit Divisor 2 |
|  | Estimate Quotients |
|  | Estimate Products |
|  | Add Decimals 1 |
|  | Subtract Decimals 1 |

## Fractions

| MA.4.FR.1 <br> Develop an understanding of the relationship between different fractions and the <br> relationship between fractions and decimals. |  |  |  |
| :--- | :--- | :---: | :---: |
| Activities Title |  |  |  |
| Course Topic |  |  |  |
| The Equivalent Fraction |  |  |  |
|  | Equivalent Fraction Wall 1 |  |  |
|  | Shading Equivalent Fractions |  |  |
|  | Comparing Fractions 1 |  |  |
|  | Compare Fractions 1a |  |  |
|  | Compare Fractions 1b |  |  |

MA.4.FR. 2
Build a foundation of addition, subtraction and multiplication operations with fractions.

| Course Topic | Activities Title |
| :--- | :--- |
| Fractions |  | Add subtract fractions 1

## Algebraic Reasoning

| MA.4.AR.1 <br> Represent and solve problems involving the four operations with whole numbers and <br> fractions. |  |  |  |  |
| :--- | :--- | :---: | :---: | :---: |
| Course Topic | Activities Title |  |  |  |
| AR - Solving Problems | Remainders by Arrays |  |  |  |
|  | Remainders by Tables |  |  |  |
|  | Problems: Times \& Divide |  |  |  |
|  | Multiply \& Divide Problems 1 |  |  |  |
|  | Common Denominator |  |  |  |
|  | Fraction Fruits Set 1 |  |  |  |
|  | Unit Fractions |  |  |  |
|  | Mental Methods Multiplication 2 |  |  |  |
|  | Mental Methods Division 2 |  |  |  |
|  | Word Problems with Letters |  |  |  |

MA.4.AR. 3
Recognize numerical patterns, including patterns that follow a given rule.

Course Topic
AR - Patterns

Activities Title
Prime or Composite?
Increasing Patterns
Decreasing Patterns
Pick the Next Number
Describing Patterns

## Measurement

| MA.4.M. 1 |  |
| :---: | :---: |
| Course Topic | Activities Title |
| M - Units of Measurement and Tools | Which Unit of Measurement? |
|  | Converting cm and mm |
|  | Converting Units of Length |
|  | Litre Conversions |
|  | Kilogram Conversions |
|  | Converting Units of Mass |
|  | Grams and Kilograms 1 |
|  | Cups, Pints, Quarts, Gallons |
|  | Inches, Feet, Yards |

MA.4.M. 2
Solve problems involving time and money.

| Course Topic | Activities Title |
| :---: | :---: |
| M - Time | What is the Time? |
|  | Time Mentals |
|  | Five Minute Times |
|  | Elapsed Time |
|  | Time Conversions: Whole Numbers 1 |
|  | Time Conversions: Whole Numbers 2 |
|  | Making Change (USD) |
|  | How Much Money? (USD) |
|  | Choosing the Fewest Coins (USD) |
|  | Money - totalling (USD) |
|  | Money Problems: Four Operations |

## Geometric Reasoning

| MA.4.GR.1 |  |
| :--- | :--- |
| MA.4.GR. 1 Draw, classify and measure angles. |  |
| Course Topic | Activities Title |
|  | Labelling Angles |
|  | Classifying Angles |
|  | Comparing Angles |
|  | What Type of Angle? |
|  | Estimating Angles |
|  | Angles of Revolution: Unknown Values |
|  | Angles of Revolution: Value of x |

MA.4.GR. 2
Solve problems involving the perimeter and area of rectangles.

## Course Topic

 Activities TitleGR - Perimeter and Area
Perimeter of Squares and Rectangles
Perimeter Detectives 1
Area of Shapes
Area: Squares and Rectangles

## Data Analysis and Probability

| MA.4.DP. 1 <br> Collect, represent and interpret data and find the mode, median and range of a data set. |  |
| :---: | :---: |
| Course Topic | Activities Title |
| DP - Statistical Data | The Median |
|  | Median From Frequency |
|  | Mode |
|  | Median \& Cumulative Frequency |
|  | Line Graphs: Interpretation |
|  | Interpreting Tables |

## Grade 5

## Number Sense and Operations

| MA.5.NSO. 1 <br> Understand the place value of multi-digit numbers with decimals to the thousandths place. |  |
| :---: | :---: |
| Course Topic | Activities Title |
| NSO: Decimal Understanding | Decimal Place Value |
|  | Decimals from Words to Digits 1 |
|  | Decimals from Words to Digits 2 |
|  | Decimal Order |
|  | Decimal Order 1 |
|  | Decimal Order 2 |
|  | Comparing Decimals 1 |
|  | Comparing Decimals 2 |
|  | Decimals on the Number Line |
|  | Rounding Decimals |
|  | Rounding Decimals 1 |
|  | Rounding Decimals 2 |

## MA.5.NSO. 2

Add, subtract, multiply and divide multi-digit numbers.

## Course Topic

NSO: Decimal Operations

## Activities Title

Add Decimals 1
Subtract Decimals 1
Decimal by Whole Number
Estimate Decimal Operations
Decimal by Whole Number
Divide Decimal by Whole Number
Long Multiplication
Divide: 2-Digit Divisor, Remainder
Mental Methods Division
Mental Methods Division 1
Mental Methods Division 2
Estimate Quotients

## Fractions

| MA.5.FR. 2 <br> Perform operations with fractions. |  |
| :---: | :---: |
| Course Topic | Activities Title |
| FR: Fraction Operations | Partition into Equal Parts |
|  | Add Unlike Fractions |
|  | Add Unlike Mixed Numbers |
|  | Add: No Common Denominator |
|  | Subtract Unlike Fractions |
|  | Subtract Unlike Mixed Numbers |
|  | Multiply Fraction by Whole Number |
|  | Multiply: Whole Number and Fraction |
|  | Multiply Fraction by Fraction |
|  | Multiply Two Fractions 1 |
|  | Fraction Wall Labelling 2 |
|  | Multiply Mixed Numbers |
|  | Divide Fractions Visual Model |

## Algebraic Reasoning

## MA.5.AR. 1

Solve problems involving the four operations with whole numbers and fractions.
Course Topic
AR: Word Problems

| Activities Title |
| :--- |
| Problems: Multiply and Divide |
| Multiply and Divide Problems 1 |
| Word Problems: Add and Subtract |
| Fraction Word Problems |
| More Fraction Problems |
| Divide by a Unit Fraction |
| Money Problems: Four Operations |

## MA.5.AR. 2

Demonstrate an understanding of equality, the order of operations and equivalent numerical expressions.

## Course Topic

## Activities Title

AR: Expressions and Equations
Writing Algebraic Expressions Order of Operations 1 (PEDMAS) Writing Equations
Write an Equation: Word Problems

MA.5.AR. 3
Analyze patterns and relationships between inputs and outputs.

| Course Topic | Activities Title |
| :--- | :--- |
| AR: Expressions and <br> Equations | Table of Values |
|  | Pattern Rules and Tables |

## Measurement

| MA.5.M. 1 |  |
| :---: | :---: |
| Course Topic | Activities Title |
| MA. Converting Units | Converting Units of Length |
|  | Customary Units of Length |
|  | Operations with Length |
|  | Meters and Kilometers |
|  | Customary Units of Weight 1 |
|  | Customary Units of Weight 2 |
|  | Milliliters and Liters |
|  | Customary Units of Capacity |
|  | Converting Units of Mass |
|  | Mass Word Problems |

## Geometric Reasoning

| MA.5.GR.4 |  |
| :--- | :--- |
| Plot points and represent problems on the coordinate plane. |  |
| Course Topic | Activities Title |
| AR: Expressions and <br> Equations | Coordinate Graphs: 1st Quadrant |

## MA.5.GR. 2

Find the perimeter and area of rectangles with fractional or decimal side lengths.

| Course Topic | Activities Title |
| :--- | :--- |
| GR. Perimeter and Area | Perimeter: Squares and Rectangles |
|  | Area: Squares and Rectangles |
|  | Area of Shapes |
|  | Area of Shapes (inches, feet, yards) |

MA.5.GR. 3
Solve problems involving the volume of right rectangular prisms.

| Course Topic | Activities Title |
| :--- | :--- |
| GR. Volume | Volume of Solids and Prisms -1cm³ blocks |
|  | How many Blocks? |
|  | Volume: Rectangular Prisms 1 |
|  | Volume: Rectangular Prisms 2 |

## Data Analysis and Probability

| MA.5.DP.1 <br> Collect, represent and interpret data and find the mean, mode, median or range of a data <br> set. |  |  |  |
| :--- | :--- | :---: | :---: |
| Course Topic | Activities Title |  |  |
| DP. Statistics | Mean |  |  |
|  | Mean from Frequency Table |  |  |
|  | Median |  |  |
|  | Median from Frequency |  |  |
|  | Mode from Frequency Table |  |  |
|  | Line Plots |  |  |

## Grade 6

## Number Sense and Operations

| MA.6.NSO.1 <br> Extend knowledge of numbers to negative numbers and develop an understanding of <br> absolute value. |  |  |
| :--- | :--- | :---: |
| Course Topic |  |  |
| NSO: Absolivities Title Value and <br> Integers | Absolute Value |  |
|  | Integers on a Number Line |  |
|  | Ordering Integers |  |
|  | Comparing Integers |  |
|  | Directed Numbers |  |
|  | Negative or Positive? |  |

## MA.6.NSO. 2

Add, subtract, multiply and divide positive rational numbers.
Course Topic
Activities Title

| NSO: Multiplying and <br> Dividing Decimals | Decimal by Decimal 1 |
| :--- | :--- |
|  | Multiply Decimals 1 |
|  | Divide Decimal by Decimal |
|  | Divide Decimal by Whole Number |
| NSO: Multiplying and <br> Dividing Fractions | Divide by a unit fraction |
|  | Divide fractions visual model |
|  | Divide Whole Number by Fraction |
|  | Dividing Fractions by Fractions 1 |
| NSO: Fraction and Decimal <br> Word Problems | Money Problems: Four Operations |
|  | Fraction Word Problems |
|  | More Fraction Problems |


| Apply properties of operations to rewrite numbers in equivalent forms. |  |
| :--- | :--- |
| Course Topic | Activities Title |
| NSO-Fractions, Decimals, and <br> Percents | Greatest Common Factor |
|  | Least Common Multiple |
|  | Exponents |
|  | Index Notation and Algebra/Exponent Notation and Algebra |
|  | Prime Factorising of Whole Numbers/ Prime Factoring |
|  | Prime Factorisation with Exponents |
| NSO-Fractions, Decimals, and <br> Percents | Common Fractions as Percentages |
|  | Decimals to Fractions 1 |
|  | Percents to Fractions |
|  | Fraction to Decimals |
|  | Fraction to Decimals 2 |


|  | Fractions to Percentages (Calculator) |
| :--- | :--- |
|  | Fractions to Percentages (Non-Calculator) |
|  | Convert Decimals to Fractions 2 |
|  | Decimals to Fractions 2 |
|  | Fractional to Terminating Decimal |
|  | Percentage of an Amount Using Fractions (<100\%) |
|  | Percentages to Fractions (with and without simplification) |

## MA.6.NSO. 4

Extend understanding of operations with integers.

| Course Topic |  |  |  | Activities Title |
| :--- | :--- | :---: | :---: | :---: |
| NSO: Operations with Integers | Integers: Add and Subtract |  |  |  |
|  | More with Integers |  |  |  |
|  | Add Integers |  |  |  |
|  | Subtract Integers |  |  |  |
|  | Adding Integers: Positive, Negative or Zero |  |  |  |
|  | Integers: Multiplication and Division |  |  |  |
|  | Multiplying and Dividing Integers |  |  |  |

## Algebraic Reasoning

| MA.6.AR.1 <br> Apply previous understanding of arithmetic expressions to algebraic expressions. <br> Course Topic |  |  |  | Activities Title |
| :--- | :--- | :---: | :---: | :---: |
| AR: Expressions \& Equations 1 | Writing Algebraic Expressions |  |  |  |
|  | Simple Substitution 1 |  |  |  |
|  | Simple Substitution 2 |  |  |  |
|  | Substitution in Formulae |  |  |  |
|  | Integers: Operations Order |  |  |  |
|  | Order of Operations 2 (PEDMAS) |  |  |  |
|  | Recognising Like Terms |  |  |  |
|  | Like Terms: Add, Subtract |  |  |  |

## MA.6.AR. 2

Develop an understanding for solving equations and inequalities. Write and solve onestep equations in one variable.

| Course Topic | Activities Title |
| :--- | :--- |
| AR: Expressions \& Equations 2 | Checking Solutions |
|  | Write an Equation: Word Problems |
|  | Writing Equations |
|  | Solve Equations: Add, Subtract 1 |
|  | Solve Equations: Add, Subtract 2 |
|  | Solve Equations: Multiply, Divide 1 |
|  | Solve Equations: Multiply, Divide 2 |

## MA.6.AR. 3

Understand ratio and unit rate concepts and use them to solve problems.

| Course Topic | Activities Title |
| :---: | :---: |
| AR: Ratios \& Proportional Relationships | Word Problems: Ratio |
|  | Solve Proportions |
|  | Dividing a Quantity in a Ratio |
|  | Equivalent Ratios |
|  | Unitary Method |
|  | Percentage Word Problems |
|  | Solve Percent Equations |
|  | Rates |
|  | Table of Values |
|  | Reading Values from a Line |
|  | Graphing from a Table of Values |
|  | Rate Word Problems |
|  | Average Speed |
|  | Best Buy |

## Geometric Reasoning

| MA.6.GR.1 |  |
| :--- | :--- |
| Apply previous understanding of the coordinate plane to solve problems. |  |
| Course Topic | Activities Title |
| GR: Coordinates, Area and | Number Plane |
|  | Coordinate Graphs |

MA.6.GR. 2
Model and solve problems involving two-dimensional figures and three-dimensional figures.

Course Topic
GR: Coordinates, Area and Volume

Activities Title

| Area of Triangles |
| :--- |
| Area of Squares and Rectangles |
| Area of Quadrilaterals |
| Area: Compound Figures |
| Surface Area: Rectangular Prisms 1 |
| Surface Area: Rectangular Pyramids |
| Volume of Rectangular Prisms 1 |
| Volume of Triangular Prisms |
| Volume: Prisms |

## Data Analysis and Probability

| MA.6.DP. 1 <br> Develop an understanding of statistics and determine measures of center and measures of variability. Summarize statistical distributions graphically and numerically. |  |
| :---: | :---: |
|  |  |
| Course Topic | Activities Title |
| DP: Statistics | Box-and-Whisker Plots 1 |
|  | Histograms |
|  | Histograms for Grouped Data |
|  | Which Measure of Central Tendency |

## Mathletics

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A 3P Learning Product

