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

| MA.3.NSO.1 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 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 Understand fractions as numbers and represent fractions. | |
|--|--------------------------------|
| Course Topic | Activities Title |
| FR - Represent and | Fractions of a Collection |
| Interpret Fractions | 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 | Activities Title |
| FR - Comparing Fractions | Comparing Fractions 1 |
| | Compare Fractions 1a |
| | Compare Fractions 1b |
| | The Equivalent Fraction |
| | 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 Measure attributes of objects and solve problems involving measurement. | |
|---|-----------------------------------|
| Course Topic | Activities Title |
| M - Units of Measurement & | Which Measuring Tool? |
| Tools | 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 |
| M - 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 | Activities Title |
| GR - Shapes | What Line Am I? |
| | Collect the Shapes 1 |
| | Collect the Shapes 2 |
| | Symmetry or Not? |

| MA.3.GR.2 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 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 (×10 and ÷10) |
| | Place Value 2 (×10 and ÷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 Develop an understanding of the relationship between different fractions and the relationship between fractions and decimals. | |
|---|------------------------------|
| Course Topic | Activities Title |
| FR - Comparing Fractions | 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 |
| FR - Operations with | Add subtract fractions 1 |
| Fractions | Add Like Mixed Numbers |
| | One Take Fraction |
| | Add Like Fractions |
| | Subtract Like Fractions |
| | Model Fractions to Multiply |
| | Multiply Fraction by Whole Number |

Algebraic Reasoning

| MA.4.AR.1 Represent and solve problems involving the four operations with whole numbers and 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 | Activities Title |
| AR - Patterns | Prime or Composite? |
| | Increasing Patterns |
| | Decreasing Patterns |
| | Pick the Next Number |
| | Describing Patterns |

Measurement

| MA.4.M.1 Measure the length of objects and solve problems involving measurement. | |
|---|------------------------------|
| Course Topic | Activities Title |
| M - Units of Measurement | Which Unit of Measurement? |
| and Tools | 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 |
| GR - Angles | 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 Title |
| GR - 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 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 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 | Activities Title |
| NSO: Decimal Operations | 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 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 | Activities Title |
| AR: Word Problems | 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 | Table of Values |
| Equations | Pattern Rules and Tables |

Measurement

| MA.5.M.1 Convert measurement units to solve multi-step problems. | |
|---|-----------------------------|
| 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 | Coordinate Graphs: 1st Quadrant |
| Equations | |

| 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 - 1cm ³ blocks |
| | How many Blocks? |
| | Volume: Rectangular Prisms 1 |
| | Volume: Rectangular Prisms 2 |

Data Analysis and Probability

| MA.5.DP.1 Collect, represent and interpret data and find the mean, mode, median or range of a data 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 Extend knowledge of numbers to negative numbers and develop an understanding of absolute value. | |
|---|---------------------------|
| Course Topic | Activities Title |
| NSO: Absolute Value and | Absolute Value |
| Integers | 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 | Decimal by Decimal 1 |
| Dividing Decimals | Multiply Decimals 1 |
| | Divide Decimal by Decimal |
| | Divide Decimal by Whole Number |
| NSO: Multiplying and | Divide by a unit fraction |
| Dividing Fractions | Divide fractions visual model |
| | Divide Whole Number by Fraction |
| | Dividing Fractions by Fractions 1 |
| NSO: Fraction and Decimal Word Problems | Money Problems: Four Operations |
| | Fraction Word Problems |
| | More Fraction Problems |

| MA.6.NSO.3 | |
|--|--|
| Apply properties of operations to rewrite numbers in equivalent forms. | |
| Course Topic | Activities Title |
| NSO-Fractions, Decimals, and | Greatest Common Factor |
| Percents | 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 | Common Fractions as Percentages |
| Percents | 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 Apply previous understanding of arithmetic expressions to algebraic expressions. | |
|---|--------------------------------|
| 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 one- step 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 a | Understand ratio and unit rate concepts and use them to solve problems. | |
| Course Topic | Activities Title | |
| AR: Ratios & Proportional | Word Problems: Ratio | |
| Relationships | 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 | |
| Volume | Coordinate Graphs | |

| MA.6.GR.2 Model and solve problems involving two-dimensional figures and three-dimensional figures. | |
|---|------------------------------------|
| Course Topic | Activities Title |
| GR: Coordinates, Area and | Area of Triangles |
| Volume | 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 | |
|--|-----------------------------------|
| 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 |



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