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Math: GRADE 3

Fundamental Place Value Concepts

Lesson 1: Place Value Names and Value of Digits

Objective: Learn place value names up to ten thousands and understand the value of individual digits.

Lesson 2: Converting Numbers and Place Values

Objective: Explore how to convert numbers to/from different place values and between standard and expanded form.

Number Comparison and Ordering

Lesson 3: Comparing Numbers

Objective: Learn how to compare numbers and determine their relationships.

Lesson 4: Greatest, Least, and Ordering Numbers

Objective: Identify the greatest and least numbers in a set and understand how to arrange numbers in ascending or descending order.

Rounding Mastery

Lesson 5: Rounding with Number Lines

Objective: In this lesson, students will learn to round numbers to the nearest ten or hundred using number lines as a visual aid. They will understand the concept of rounding and practice using number lines to improve their accuracy in rounding to the nearest ten or hundred.

Lesson 6: Rounding within Tables

Objective: In this lesson, students will explore the method of rounding numbers within tables.

They will understand how tables can be used as a systematic approach for rounding to the nearest ten or hundred. Through practical exercises, students will develop proficiency in rounding numbers accurately within tables.

Estimating Sums

Lesson 7: Rounding for Estimation

Objective: Understand how to estimate sums by rounding numbers up to 1,000. Practice rounding and estimating sums in various scenarios.

Lesson 8: Using Compatible Numbers for Estimation

Objective: Learn the concept of using compatible numbers to estimate sums accurately. Apply this knowledge to estimate sums in different contexts.

Estimating Differences

Lesson 9: Rounding for Estimating Differences

Objective: Learn to estimate differences by rounding numbers up to 1,000. Practice rounding and estimating differences in various scenarios.

Lesson 10: Using Compatible Numbers for Estimation

Objective: Understand the concept of using compatible numbers to estimate differences accurately. Apply this knowledge to estimate differences in different contexts.

Mastering Three-Digit Addition

Lesson 11: Strategies for Three-Digit Addition

Objective: Learn to use compensation to add numbers up to three digits efficiently. Apply these strategies to solve addition problems.

Lesson 12: Three-Digit Addition Mastery

Objective: Build proficiency in three-digit addition. Explore both non-regrouping and regrouping scenarios, practicing with and without word problems.

Activities: Solve three-digit addition problems with and without regrouping, using real-world situations to apply the skills learned.

Advanced Addition Skills

Lesson 13: Patterns in Increasing Place Values

Objective: Understand and identify patterns in addition as place values increase, providing a strong foundation for adding larger numbers.

Lesson 14: Adding Four-Digit Numbers

Objective: Learn to add two four-digit numbers efficiently, and apply these skills to solve real-world word problems.

Subtraction Mastery

Lesson 15: Subtraction Strategies and Practice

Objective: In this lesson, students will explore subtraction using compensation, focusing on numbers up to three digits. They will understand how to apply compensation to make subtraction more manageable and practice this strategy through various exercises.

Lesson 16: Subtraction with Regrouping and Word Problems

Objective: This lesson will cover subtraction with and without regrouping for three-digit numbers. Students will also learn to apply subtraction skills to real-world scenarios through word problems. The objective is to reinforce their understanding of subtraction, both with and without regrouping, in practical contexts.

Advanced Subtraction Techniques

Lesson 17: Subtraction Patterns and Place Values

Objective: Explore subtraction patterns that arise as place values increase.

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Lesson 18: Subtracting Four or Five-Digit Numbers

Objective: Learn the techniques for subtracting two numbers with up to four or five digits without regrouping.

Exploring Addition Properties

Lesson 19: Properties of Addition

Objective: Discover and comprehend the different properties of addition, such as the commutative and associative properties.

Lesson 20: Completing Equations with Addition Properties

Objective: Learn to complete equations using addition properties and identify which properties apply in different situations.

Skip counting

Lesson 21: Skip-Counting Mastery

Objective: Learn the basics of skip-counting and practice counting by various intervals.
Activities: Engage in skip-counting exercises by 2s, 3s, 5s, and 10s.

Mastering Multiplication Concepts

Lesson 22: Understanding Repeated Addition and Equal Groups

Objective: In this lesson, students will identify and understand repeated addition as a foundation for multiplication, particularly focusing on equal groups with sums up to 25. They will practice writing addition sentences to represent these equal groups.

Lesson 23: Multiplication with Arrays and Number Lines

Objective: This lesson will introduce students to multiplication expressions using arrays and number lines.

Students will learn how to identify and write multiplication sentences to represent equal groups or repeated addition scenarios and make connections between these concepts.

Lesson 24: Relating Addition and Multiplication, Comparing Numbers

Objective: In this comprehensive lesson, students will deepen their understanding of multiplication by exploring the relationship between addition and multiplication. They will also learn how to compare numbers using multiplication. This lesson aims to help students grasp the versatility of multiplication in different contexts and problem-solving scenarios.

Mastering Multiplication Fluency

Lesson 25: Multiplication Facts Mastery

Objective: Master multiplication facts for 2, 3, 4, 5, and 10. Determine true or false statements related to these facts.

Lesson 26: Exploring Advanced Multiplication

Objective: Delve deeper into multiplication by learning facts for 6, 7, 8, and 9. Develop skills in sorting, finding missing factors, and identifying true or false statements.

Excelling in Multiplication Up to 12

Lesson 27: Mastering Multiplication Facts to 12

Objective: Learn multiplication facts up to 12, differentiate between true and false statements, find missing factors, and understand multiplication sentences up to 12.

Understanding Multiplication Properties

Lesson 28: Properties of Multiplication

Objective: Learn the properties of multiplication, including commutative, associative, and distributive properties.

Lesson 29: Applying Multiplication Properties

Objective: Apply multiplication properties to solve mathematical problems, complete sentences involving multiplication by 0 or 1, write multiplication sentences for arrays, and use the distributive property to find missing factors.

Multiplication Word Problems

Lesson 30: Multiplication Word Problems with Factors up to 10

Objective: Solve multiplication word problems where factors are up to 10.

Lesson 31: Finding the Missing Number in Multiplication Word Problems

Objective: Learn how to identify and find the missing number in multiplication word problems with factors up to 10.

Exploring Two-Digit Multiplication

Lesson 32: Multiplying by Multiples of Ten with Place Value

Objective: In this lesson, students will learn how to multiply two-digit numbers by multiples of ten using the place value method. They will gain a solid understanding of how place value affects multiplication and apply this knowledge to solve problems effectively.

Lesson 33: Multiplying One-Digit Numbers by Two-Digit Numbers Using Visual Models

Objective: This lesson will teach students how to multiply one-digit numbers by two-digit numbers using visual models such as grids and area models. Students will develop a strong foundation in visualizing and solving multiplication problems.

Lesson 34: Solving Real-World Problems with Two-Digit Multiplication

Objective: In this practical lesson, students will apply their knowledge of two-digit multiplication to real-world scenarios through word problems. They will learn how to translate these problems into mathematical equations and solve them effectively, demonstrating the practical use of two-digit multiplication skills.

Exploring Division Concepts

Lesson 35: Division by Counting Equal Groups

Objective: In this introductory lesson, students will learn to divide by counting equal groups. They will understand the basic concept of division and practice sharing objects into equal groups to grasp the fundamental idea of division.

Lesson 36: Writing Division Sentences and Dealing with 1 and 0

Objective: This lesson focuses on writing division sentences for groups and covers cases involving division by 1 and 0. Students will gain proficiency in articulating division problems and understand the unique scenarios where division by 1 or 0 occurs.

Lesson 37: Relating Multiplication and Division, Arrays, and Real-World Applications

Objective: In this comprehensive lesson, students will explore the relationship between multiplication and division, both for groups and arrays. They will also discover how these concepts apply to real-world scenarios. By the end of this lesson, students will have a strong grasp of division and its connections to other mathematical operations and practical situations.

Division Fluency up to 10

Lesson 38: Division Facts Practice (2, 3, 4, 5, and 10)

Objective: Practice division facts for numbers 2, 3, 4, 5,6,7,8,9 and 10.
Activities: Solve division fact problems and determine if they are true or false.

Module 39: Division Fluency up to 12

Objective: Enhance fluency in division by practicing division facts and sentences up to 12.

Lesson 40: Division Facts and Sentences (Up to 12)

Objective: Practice division facts up to 12 and work on division sentences.
Activities: Solve division fact problems, determine if they are true or false, find missing numbers in division facts and sentences.

Division Word Problem Solving

Lesson 41: Introduction to Division Word Problems

Objective: In this lesson, students will be introduced to division word problems and learn how to interpret and solve them. They will gain proficiency in understanding real-life contexts where division is applied.

Lesson 42: Advanced Division Word Problems

Objective: Building upon the foundational knowledge from the first lesson, this lesson presents more complex division word problems. Students will further develop their problem-solving skills and the ability to apply division in various real-world scenarios.

Mixed Operations: Multiplication and Division

Lesson 43: Multiplication and Division Facts

Objective: Understand and practice multiplication and division facts up to 12.

Lesson 44: Multiplication and Division Word Problems

Objective: Apply multiplication and division skills to solve word problems.

Two-Step Word Problems

Lesson 45: Two-Step Addition and Subtraction Word Problems

Objective: Solve two-step word problems that involve addition and subtraction operations.

Lesson 46: Two-Step Multiplication and Division Word Problems

Objective: Solve two-step word problems that involve multiplication and division operations.

Equations with Unknown Numbers

Lesson 47: Introduction to Equations

Objective: Understand the concept of equations in mathematics.
Activities: Differentiate between equations and expressions. Identify equations in various forms.

Lesson 48: Solving Equations

Objective: Learn how to solve equations for unknown numbers using addition, subtraction, multiplication, and division.

Exploring Fractions

Lesson 49: Introduction to Fractions and Equal Parts

Objective: In this foundational lesson, students will be introduced to the concept of fractions. They will learn to identify equal parts and understand the basics of fractions by making halves, thirds, and fourths.

Lesson 50: Extending Fraction Knowledge

Objective: Building on the previous lesson, students will further their understanding of fractions by making sixths and eighths. They will explore a wider range of fractional parts to develop a strong foundation in working with fractions.

Lesson 51: Visualizing Fractions with Fraction Bars and Area Models

Objective: This lesson introduces students to visual representations of fractions, including fraction bars and area models. They will learn how to use these tools to show and understand fractions.

Lesson 52: Applying Fraction Knowledge

Objective: In the final lesson, students will apply their fraction knowledge by matching fractions to models, writing fractions using numbers and words, and decomposing fractions into unit fractions. They will solidify their understanding of fractions and their practical applications in various contexts.

Understanding Fractions on Number Lines

Lesson 53: Representing Fractions on Number Lines - Unit Fractions

Objective: In this lesson, students will learn to represent unit fractions on number lines. They will gain a clear understanding of how to identify, graph, and work with fractions such as 1/2, 1/3, and 1/4 on a number line.

Lesson 54: Exploring Fractions on Number Lines - Halves, Fourths, and Eighths

Objective: Building on the foundation from the first lesson, students will explore fractions like halves, fourths, and eighths on number lines. They will learn to graph these fractions accurately and understand their relative positions on the number line.

Fraction Word Problems

Lesson 55: Solving Unit Fraction Word Problems

Objective: Learn to solve word problems involving unit fractions.
Activities: Modeling word problems with unit fractions and solving word problems with unit fractions.

Lesson 56: actions of a Whole and Group Word Problems

Objective: Learn to solve word problems involving fractions of a whole and fractions of a group.
Activities: Modeling word problems with fractions of a whole, solving word problems with fractions of a whole, and solving word problems with fractions of a group.

Mastering Equivalent Fractions

Lesson 57: Discovering Equivalent Fractions with Fraction Strips

Objective: In this lesson, students will explore equivalent fractions using fraction strips as a visual tool. They will learn to identify and find equivalent fractions to build a strong foundation in understanding the concept.

Lesson 58: Visualizing Equivalent Fractions with Area Models

Objective: Building on the previous lesson, students will use area models to find equivalent fractions. They will compare two different area models to identify equivalent fractions and understand the concept visually.

Lesson 59: Identifying and Writing Equivalent Fractions

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Objective: In this comprehensive lesson, students will learn to identify equivalent fractions on number lines and through various methods. They will practice finding and writing equivalent fractions and reduce fractions to their lowest terms. This lesson aims to provide a deep understanding of equivalent fractions and their practical applications.

Fractions Equivalent to Whole Numbers

Lesson 60: Visualizing Fractions Equivalent to 1 on Number Lines

Objective: In this lesson, students will explore and graph fractions equivalent to the whole number 1 on number lines. They will gain a visual understanding of fractions that represent a whole.

Lesson 61: Identifying and Selecting Fractions Equivalent to Whole Numbers

Objective: Building on the previous lesson, students will learn to identify and select fractions that are equivalent to whole numbers using models and mathematical reasoning. They will develop the skill to recognize and work with fractions that represent complete units.

Comparing Fractions with Like Denominators

Lesson 62: Using Models for Comparison

Objective: Learn how to compare fractions with like denominators using models.

Comparing Fractions with Like Numerators

Lesson 63: Using Models for Comparison

Objective: Learn how to compare fractions with like numerators using models.

Exploring Fraction Comparisons

Lesson 64: Visualizing and Comparing Fractions

Objective: In this foundational lesson, students will compare fractions using visual models and number lines. They will build a strong understanding of comparing fractions and recognize the relationships between them.

Lesson 65: Graphing and Comparing Fractions on Number Lines

Objective: This lesson deepens students' ability to compare fractions by graphing them on number lines. They will refine their skills in visualizing fractions and understanding their relative positions on a number line.

Lesson 66: Practical Application: Comparing Fractions in Recipes

Objective: In this practical lesson, students will apply their fraction comparison skills in real-world contexts, specifically within recipes. They will learn how to compare and work with fractions while preparing various dishes, making their mathematical knowledge relevant and useful in everyday life.

Ordering Fractions Proficiency

Lesson 67: Mastering Fraction Ordering

Objective: Achieve proficiency in ordering fractions through activities involving number lines, like denominators, like numerators, and general ordering.
Activities: Practice ordering fractions on number lines, ordering fractions with common denominators, ordering fractions with common numerators, and general fraction ordering.

Exploring Area Concepts

Lesson 68: Understanding Area with Unit Squares

Objective: In this foundational lesson, students will learn to find the area of figures made of unit squares. They will gain a solid understanding of the concept of area and its connection to the arrangement of unit squares within shapes.

Lesson 69: Applying Area Knowledge to Rectangles and Figures

Objective: This lesson extends the understanding of area to practical applications. Students will learn to find the area of rectangles by tiling them with unit squares, apply multiplication to calculate areas, and solve problems involving missing side lengths of rectangles.

Lesson 70: Solving Real-World Area Problems

Objective: In this lesson, students will practice finding the area of rectangles and squares in real-world contexts, solving word problems that require the application of area concepts. They will also learn to find the area of complex figures by dividing them into rectangles, enhancing their problem-solving skills.

Lesson 71: Advanced Area Calculations and Problem Solving

Objective: Building on the previous lessons, this advanced lesson focuses on finding the area between two rectangles and solving complex area problems. Students will refine their skills in calculating area and apply them to solve challenging and multi-step problems.

Discovering Perimeter and Its Applications

Lesson 72: Perimeter of Rectangles and Quadrilaterals

Objective: In this foundational lesson, students will learn to calculate the perimeter of rectangles and other quadrilaterals. They will grasp the concept of perimeter as the sum of all sides and apply it to various shapes.

Lesson 73: Exploring Perimeter of Complex Shapes

Objective: This lesson extends the understanding of perimeter to rectilinear shapes and more complex polygons. Students will learn how to calculate the perimeter of irregular shapes and develop problem-solving skills in real-life contexts.

Lesson 74: Perimeter Problem Solving and Relationships

Objective: In this lesson, students will solve perimeter-related word problems and explore the relationship between area and perimeter, emphasizing finding the perimeter when area is given.

Lesson 75: Advanced Applications: Area and Perimeter Relationships

Objective: Building upon the previous lessons, students will delve deeper into the relationship between area and perimeter, focusing on finding the area when the perimeter is known. They will refine their problem-solving skills and apply them to more complex situations.

Understanding Lines and Angles

Lesson 76: Lines, Line Segments, and Rays

Objective: In this foundational lesson, students will learn the basic concepts of lines, line segments, and rays. They will be able to distinguish between these elements and understand their properties.

Lesson 77: Exploring Angles and Angle Measurements

Objective: Building on the previous lesson, this session focuses on angles. Students will learn to compare angles, recognizing those greater than, less than, or equal to a right angle. They will develop the ability to classify angles based on their measurements.

Lesson 78: Lines and Their Relationships

Objective: In this lesson, students will explore different types of lines, including parallel, perpendicular, and intersecting lines. They will understand the relationships between these lines and be able to identify and classify them in various contexts.

Exploring Quadrilaterals

Lesson 79: Understanding Parallel Sides in Quadrilaterals

Objective: In this foundational lesson, students will learn about parallel sides within quadrilaterals. They will identify and understand the concept of parallel lines within four-sided shapes.

Lesson 80: Identifying Different Types of Quadrilaterals

Objective: Building on the previous lesson, students will explore specific types of quadrilaterals, including rectangles, parallelograms, rhombuses, and trapezoids. They will learn to recognize the unique characteristics of each type.

Lesson 81: Classifying and Drawing Quadrilaterals

Objective: In this practical lesson, students will classify various quadrilaterals based on their properties and learn how to draw these shapes accurately. They will develop the ability to identify and categorize quadrilaterals in different contexts.

Clocks and Time

Lesson 82: Matching Clocks and Times

Objective: In this foundational lesson, students will learn to match analog clocks with their corresponding times. They will develop the skill to read and recognize time displayed on analog clocks.

Lesson 83: Understanding A.M. and P.M., Writing Times

Objective: Building on the previous lesson, students will explore the concepts of A.M. and P.M. and learn to write times using both analog and digital formats. They will gain an understanding of the 12-hour clock system and how to express time accurately.

Calculating Elapsed Time

Lesson 84: Finding End Times and Elapsed Time

Objective: In this foundational lesson, students will learn how to find the end time after a given duration and calculate elapsed time. They will gain practical skills in time calculations.

Lesson 86: Solving Elapsed Time Word Problems

Objective: Building on the previous lesson, this session focuses on solving word problems related to finding end times and elapsed time. Students will apply their knowledge to real-world scenarios, enhancing their problem-solving abilities involving time.

Exploring Customary Units of Measurement

Lesson 87: Understanding Length, Weight, and Volume Measurements

Objective: In this foundational lesson, students will learn to read a Fahrenheit thermometer, measure using an inch ruler, and select the appropriate customary unit for length, weight, and volume. They will gain a solid understanding of different measurements and when to use specific units.

Lesson 88: Applying Customary Units in Real-World Scenarios

Objective: Building on the previous lesson, students will apply their knowledge of customary units to solve practical problems. They will determine the appropriate units for length, weight, and volume in various real-world situations, enhancing their ability to make accurate measurements in everyday contexts.

Mastering Metric Units of Measurement

Lesson 89: Understanding Metric Measurements and Reading Celsius Thermometer

Objective: In this foundational lesson, students will learn to read a Celsius thermometer and understand the appropriate metric units for length, weight, and volume. They will gain a comprehensive understanding of metric measurements and their applications.

Lesson 90: Applying Metric Units in Problem Solving

Objective: Building on the previous lesson, students will apply their knowledge of metric units to solve measurement word problems. They will determine the appropriate metric units for various scenarios, developing problem-solving skills related to length, weight, and volume **in** practical contexts.

Exploring Data and Graphs

Lesson 91: Interpreting and Using Bar Graphs

Objective: In this foundational lesson, students will learn to interpret bar graphs and use them to solve problems. They will gain the skills to read and understand data presented in bar graph form.

Lesson 92: Creating Bar Graphs

Objective: Building on the previous lesson, students will learn to create their own bar graphs to represent data effectively. They will acquire the ability to display information visually.

Lesson 93: Understanding Pictographs and Line Plots

Objective: This lesson introduces students to the interpretation of pictographs and line plots. They will understand how these graphical representations can convey data and gain the skills to read and interpret them.

Lesson 94: Creating Line Plots with Fractions

Objective: Building on the previous lessons, students will learn to create line plots, particularly those involving fractions. They will develop the ability to represent and organize fractional data effectively.

Money Matters

Objective: Develop financial literacy by understanding money, making purchases, and handling change.

Lesson 95: Counting Money and Making Change

Objective: Learn to count coins and bills, up to a $5 bill, and solve word problems involving money. Develop skills in making change during transactions.

Lesson 96: Managing Purchases and Price Lists

Objective: Explore purchasing scenarios and understand how to determine if you have enough money for a purchase, especially up to $10. Analyze price lists and make informed decisions.