

**Camelot Learning
Scope and Sequence
Computation**

Time: 40 minute Lessons

| Lesson | Learning Quest | Concept/Skill | NCTM Standard | NCTM Expectation |
|--|--|--|---|--|
| <p>Lesson 1: Commutative Property</p> <p>Lesson 2: Commutative Property Review</p> | <p>How can you use your knowledge of <i>Commutative Property</i> to recall basic addition facts?</p> | <ul style="list-style-type: none"> • Subtraction facts practice • Recognize, describe, extend, create, and replicate a variety of patterns • Use the commutative property to add • Add and subtract whole numbers • Tournament Time explanation | <p>Number and Operations</p> <p>Algebra</p> <p>Number and Operations</p> <p>Communication</p> | <ul style="list-style-type: none"> • Develop a fluency in subtracting whole numbers • Recognize, describe, and extend patterns such as simple numeric patterns and translate from one representation to another • Illustrate general principles and properties of operations, such as commutativity, using specific numbers • Develop and use strategies for whole-number computations, with a focus on addition and subtraction • Develop fluency with basic number combinations for addition and subtraction • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely |
| <p>Lesson 3: The Ten Frame</p> <p>Lesson 4: The Ten Frame</p> | <p>How can you use the strategy <i>'Make a Ten'</i> to add and subtract facts to 18?</p> | <ul style="list-style-type: none"> • Subtraction facts practice • Apply addition and subtraction in everyday situations | <p>Number and Operations</p> | <ul style="list-style-type: none"> • Develop fluency in subtracting whole numbers • Develop a sense of whole numbers and represent and use them in flexible ways, including relating, |

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| Review | | <ul style="list-style-type: none"> • Describe and interpret data shown in tables • Tournament Time explanation | Communication | <p>composing, and decomposing numbers</p> <ul style="list-style-type: none"> • Develop and use strategies for whole-number computations, with a focus on addition and subtraction • Use a variety of methods and tools to compute including objects, mental computation, estimation, paper and pencil, and calculators • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely |
| <p>Lesson 5: Mental Math Strategies</p> <p>Lesson 6: Mental Math Strategies Review</p> | How can you use <i>Mental Math Strategies</i> to find sums and differences without doing the written problems in your head? | <ul style="list-style-type: none"> • Subtraction facts practice • Use mental math strategies to compute numbers up to three-digits • Use estimation skills to arrive at conclusions • Form rules based on patterns • Find the sums and differences of one and two-digit numbers with regrouping | Number and Operations | <ul style="list-style-type: none"> • Develop fluency in subtracting whole numbers • Develop and use strategies for whole-number computations, with a focus on addition and subtraction • Develop fluency with basic number combinations for addition and subtraction • Use a variety of methods and tools to compute, including mental computation and estimation. • Develop and use strategies to estimate the results of whole-number computations and to judge |

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| | | | Algebra | <p>the reasonableness of such results</p> <ul style="list-style-type: none"> Recognize, describe, and extend patterns such as simple numeric patterns and translate from one representation to another |
| <p>Lesson 7: Caterpillar Ride</p> <p>Lesson 8: Caterpillar Ride Review</p> | <p>How can your knowledge of rounding and estimating help you solve multi-digit addition and subtraction problems?</p> | <ul style="list-style-type: none"> Subtraction facts practice Find the sums and differences of one and two-digit numbers with regrouping Use mental math strategies to compute numbers up to three digits Use estimation skills to arrive at conclusions Round whole numbers and decimals Tournament Time explanation | <p>Number and Operations</p> <p>Problem Solving</p> | <ul style="list-style-type: none"> Develop fluency in subtracting whole numbers Develop and use strategies for whole-number computations, with a focus on addition and subtraction Develop fluency with basic number combinations for addition and subtraction Use a variety of methods and tools to compute, including mental computation and estimation. Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results Monitor and reflect on the process of mathematical problem solving |
| <p>Lesson 9: Mental Math Strategies</p> <p>Lesson 10:</p> | <p>How can you use <i>Mental Math Strategies</i> to solve multi-digit whole number addition problems in your head?</p> | <ul style="list-style-type: none"> Subtraction facts practice Use mental math strategies to compute numbers up to three | <p>Number and Operations</p> | <ul style="list-style-type: none"> Develop fluency in subtracting whole numbers Develop and use strategies for whole-number computations, with a focus on addition and subtraction |

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| <p>Mental Math Strategies Review</p> | | <p>digits</p> <ul style="list-style-type: none"> • Find the sums and differences of two and three-digit numbers with regrouping • Tournament Time explanation | <p>Problem Solving</p> | <ul style="list-style-type: none"> • Develop fluency with basic number combinations for addition and subtraction • Use a variety of methods and tools to compute, including mental computation and estimation • Apply and adapt a variety of appropriate strategies to solve problems |
| <p>Lesson 11: Mental Math with Multi-Digits</p> <p>Lesson 12: Mental Math with Multi-Digits Review</p> | <p>How does understanding <i>Place Value</i> help you when you are adding and subtracting numbers that have more than one digit?</p> | <ul style="list-style-type: none"> • Subtraction facts practice • Find sums and differences of two and three-digit numbers with regrouping • Use estimation skills to arrive at conclusions • Use place value models to represent the value of digits in a number | <p>Number and Operations</p> | <ul style="list-style-type: none"> • Develop fluency in subtracting whole numbers • Develop and use strategies for whole-number computations, with a focus on addition and subtraction • Develop fluency with basic number combinations for addition and subtraction • Use a variety of methods and tools to compute, including mental computation and estimation. • Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results • Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers |

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| | | | | <ul style="list-style-type: none"> Recognize equivalent representations for the same number and generate them by decomposing and composing numbers Connect number words and numerals to the quantities they represent, using various physical models and representations |
| <p>Lesson 13: Knowledge of Place Value</p> <p>Lesson 14: Knowledge of Place Value Review</p> | <p>How can you use your knowledge of place value to help you compare and order large numbers?</p> | <ul style="list-style-type: none"> Subtraction facts practice Identify the place and value of digits in five-digit numbers Order and compare numbers through the ten-thousands Use place value models to represent the value of digits in a number Tournament Time explanation | <p>Number and Operations</p> <p>Problem Solving</p> | <ul style="list-style-type: none"> Develop fluency in subtracting whole numbers Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers Recognize equivalent representations for the same number and generate them by decomposing and composing numbers Connect number words and numerals to the quantities they represent, using various physical models and representations Solve problems that arise in mathematics and in other contexts |
| <p>Lesson 15: Extending Knowledge</p> | <p>How can you use your knowledge of place</p> | <ul style="list-style-type: none"> Subtraction facts practice | <p>Number and Operation</p> | <ul style="list-style-type: none"> Develop fluency in subtracting whole numbers |

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| <p>of Place Value</p> <p>Lesson 16: Extending Knowledge of Place Value Review</p> | <p>value and basic facts to solve multi-digit subtraction problems?</p> | <ul style="list-style-type: none"> • Use mental math strategies to compute to find sums and differences • Use estimation skills to arrive at conclusions • Find sums and differences of two and three-digit numbers with regrouping • Use place value skills to rename numbers | | <ul style="list-style-type: none"> • Develop and use strategies for whole-number computations, with a focus on addition and subtraction • Develop fluency with basic number combinations for addition and subtraction • Use a variety of methods and tools to compute, including mental computation and estimation. • Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results • Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers • Recognize equivalent representations for the same number and generate them by decomposing and composing numbers • Connect number words and numerals to the quantities they represent, using various physical models and representations |
| <p>Lesson 17: Finding Patterns to</p> | <p>How can we use <i>Patterns</i> as a problem-</p> | <ul style="list-style-type: none"> • Subtraction facts practice | <p>Number and Operations</p> | <ul style="list-style-type: none"> • Develop fluency in subtracting whole numbers |

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| | | <p>powers of ten using mental math</p> <ul style="list-style-type: none"> • Tournament Time explanation | <p>Algebra</p> <p>Communication</p> | <p>use these combinations to mentally compute related problems, such as 30×50</p> <ul style="list-style-type: none"> • Select appropriate methods and tools for computing with whole numbers • Use a variety of methods and tools to compute, including mental computation and estimation. • Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results • Identify and describe geometric and numeric patterns • Represent and analyze patterns • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely |
| <p>Lesson 27: Knowledge of Addition and Division to Find the Mean</p> <p>Lesson 28: Knowledge of</p> | <p>How can we use our knowledge of addition and division to find the mean distance a marble travels at a given height?</p> | <ul style="list-style-type: none"> • Multiplication facts practice • Add and divide whole numbers • Calculate the mean of a set of data • Find the mean in an | <p>Number and Operations</p> <p>Data Analysis and Probability</p> | <ul style="list-style-type: none"> • Develop fluency in adding, subtracting, multiplying, and dividing whole numbers • Find use and interpret measuring of center and spread, including mean • Collect data using observations and experiments |

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| | | <p>through the millions</p> <ul style="list-style-type: none"> • Compare and order numbers through the millions • Tournament Time explanation | Communication | <ul style="list-style-type: none"> • Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely |
| <p>Lesson 33: Computational Skills of Multiplying</p> <p>Lesson 34: Computational Skills of Multiplying Review</p> | <p>How can you use <i>Computational Skills</i> of Multiplying a 3-digit number by a 2-digit number to solve problems?</p> | <ul style="list-style-type: none"> • Multiplication facts practice • Find products of two and three-digit numbers • Find the sum of two partial products • Use mental math strategies to find products of two and three-digit numbers • Estimate products • Use problem solving strategies • Tournament Time explanation | <p>Number and Operations</p> <p>Problem Solving</p> | <ul style="list-style-type: none"> • Develop fluency in multiplying and adding whole numbers • Develop fluency with number combinations for multiplication and division • Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results • Use a variety of methods and tools to compute, including mental computation and estimation. • Apply and adapt a variety of appropriate strategies to solve problems |
| <p>Lesson 35: Computational Skills of Dividing</p> | <p>How can you use <i>Computational Skills</i> of Dividing a 3-digit</p> | <ul style="list-style-type: none"> • Multiplication facts practice • Use estimation skills to | Number and Operations | <ul style="list-style-type: none"> • Develop fluency in addition, subtraction, multiplication, and division of whole numbers |

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| <p>Lesson 36: Computational Skills of Dividing Review</p> | <p>number by a 2-digit number to solve problems?</p> | <p>arrive at conclusions</p> <ul style="list-style-type: none"> • Use mental math strategies to find products and quotients • Divide three-digit numbers by two-digit numbers • Use problem solving strategies • Tournament Time explanation | <p>Problem Solving</p> | <ul style="list-style-type: none"> • Develop fluency with number combinations for multiplication and division • Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results • Use a variety of methods and tools to compute, including mental computation and estimation • Apply and adapt a variety of appropriate strategies to solve problems |
| <p>Lesson 37: Ordered Pairs</p> <p>Lesson 38: Ordered Pairs Review</p> | <p>How can you use <i>Ordered Pairs</i> to identify locations on a grid?</p> | <ul style="list-style-type: none"> • Multiplication facts practice • Locate points on a coordinate grid • Use ordered pairs to plot points • Tournament Time explanation | <p>Number and Operations</p> <p>Geometry</p> <p>Communications</p> | <ul style="list-style-type: none"> • Develop fluency in multiplying whole numbers • Create and use appropriate graphical representations (coordinate grid) • Find the distance between points along horizontal and vertical lines of a coordinate system • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely |

