Grade: 4	Content Area: Mathematics

Long Beach Island Consolidated School District

Introduction

Students in Grade 4 Mathematics will complete five units in the following disciplines: Place Value, Fractions, Properties of Equations with multi-digit equations, decimals and geometry. Student progress will be measured in a variety of methods.

Original Adoption: October 23, 2018
Revised on: March 1, 2019, August 7, 2019
Revised by: C. McBride, J. Oldham

Recommended Pacing Guide	
Unit 1: Place Value Understandings and Multiplicative Comparisons	19 days
Unit 2: Compute with Multi-digit Whole Numbers and Define Equivalent Fractions	55 days
Unit 3: Solve problems involving addition, subtraction, and multiplication of fractions. Properties of operations with multi-digit arithmetic	39 days
Unit 4: Extend Understanding of Fractions, Solve Word Problems, and Introduce Decimals.	37 days
Unit 5: Compare decimals and measure/classify geometric figures	30 days

Unit 1: Place Value Understandings and Multiplicative Comparisons	**Duration:** 19 Days
Standards/Learning Targets	

Grade: 4	Content Area: Mathematics

New Jersey Student Learning Standards:
- **4.NBT.A.1** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.
- **4.NBT.A.2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on the meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
- **4.NBT.A.3** Use place value understanding to round multi-digit whole numbers to any place.
- **4.NBT.B.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm.
- **4.OA.A.1** Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations
- **4.OA.A.2** Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

Standards for Mathematical Practice:
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Interdisciplinary Connections:

Reading:

- **RI.4.4.** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

Speaking and Listening:

- **SL2.** Integrates, evaluates and presents information in diverse media and formats, including visually, quantitatively, and orally.
- **SL4.** Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

Writing:

Grade: 4	**Content Area: Mathematics**

- **W4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Technology Standards:
- 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
- A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations
- C. Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- D. Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
- E: Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
- F: Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

8.1.5.E.1 Use digital tools to research and evaluate the accuracy and relevance of, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.

8.2.5.C.4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

8.2.5.D.3 Follow step by step directions to assemble a product or solve a problem.

21st Century Themes/Career Readiness:
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

9.2.4.A.2 Identify various life roles and civic and work-related activities in the school, home, and community

Evidence of Student Learning

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Formative Tasks:
- Solve and Share
- Quick Check quizzes
- Daily Review
- Cooperative group learning
- Exit slips
- Analysis of student work
- Teacher observations/anecdotal/checklists
- Self-reflection
- Math journals

Alternative Assessments:
- Performance Tasks
- Student created models
- Written/verbal explanations
- Peer assessment
- Self-assessment

Summative Assessments:
- Topic tests
- Extension Projects
- Topic Performance Assessment

Benchmark Assessments:
- Pearson cumulative benchmark assessment
- Beginning of the year, mid year, and end of the year

Knowledge & Skills

Enduring Understandings:
- Generalize place value understanding for multi-digit whole numbers.
- Use the four operations with whole numbers to solve problems.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Essential Questions:
- How are the digit values related within a number?
- What are some ways to compare the value of numbers?
- What does it mean to round?
- How can we express a multiplication in words?
- What words can we look for in a word problem that would tell us what operation to perform?
- What is an equation?
- How do you set up a multi-digit addition or subtraction algorithm.

Core Instructional & Supplemental Materials

Suggested Activities/Resources:
- Pearson Envision 2.0 2016
- Happy Numbers
- Reflex Math
- Gizmos
- Better Lessons
  - Number & Operations in Base Ten

Varied Levels of Text:
- Marilyn Burns Math Libraries Grade 4-6 http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf

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○ Operations & Algebraic Thinking ● ST Math	

Modifications and Accommodations

English Language Learners:
- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

Special Education/504 Plans/Students with Disabilities:
- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Differentiate tests to meet the needs of students
- Shorten tests and give in multiple sessions if needed
- Reteach/Review before giving assessments
- Read assessment directions for each section to student(s)
- Allow the use of tools such as a computer or iPad
- Allow the use of manipulatives such as counters during testing
- Highlight key parts of equations or word problems for student(s)
- Allow verbal answers
- Print tests with larger font
- Allow for extra time if needed/necessary

Students at Risk of Failure:
- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules

- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

Economically Disadvantaged:
- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

Culturally Diverse:
- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions, props, realia, manipulatives, concrete materials, visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students

Unit 2: Compute with Multi-digit Whole Numbers and Define Equivalent Fractions	**Duration:** 55 Days
Standards/Learning Targets	

- **4.NBT.B.4** Fluently add and subtract multi-digit whole numbers using the standard

algorithm.
- **4.NBT.B.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.NBT.B.6** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.NF.A.1** Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. (Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100).
- **4.NF.A.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.
- **4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- **4.OA.B.4** Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

Standards for Mathematical Practice:
- MP.1 Make sense of problems and persevere in solving them.
- MP.2 Reason Abstractly and quantitatively.
- MP.3 Construct viable arguments and critique the reasoning of others.
- MP.4 Model with mathematics.
- MP.6 Attend to precision.

Interdisciplinary Connections:

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Reading:

- **RI.4.4.** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

Speaking and Listening:

- **SL2.** Integrate, evaluate and present information in diverse media and formats, including visually, quantitatively, and orally.
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- **W4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Technology Standards:
- 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
- C. Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- F: Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

21st Century Themes/Career Readiness:
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Formative Tasks:
- Solve and Share
- Quick Check quizzes
- Daily Review
- Cooperative group learning
- Exit slips
- Analysis of student work
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Alternative Assessments:
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Summative Assessments:	Benchmark Assessments:
- Topic tests - Extension Projects - Topic Performance Assessment	- Pearson cumulative benchmark assessment - Beginning of the year, mid year, and end of the year

Knowledge & Skills

Enduring Understandings:	Essential Questions:
- Use the four operations with whole numbers to solve problems. - Use place value understanding and properties of operations to perform multi-digit arithmetic. - Extend understanding of fraction equivalence and ordering.3 - Gain familiarity with factors and multiples.	- How do you set up a multi-digit addition and subtraction problems with the standard algorithm? - What are different ways we can explain how to solve multi-digit multiplication problems? - What are different ways we can explain how to solve multi-digit division problems? - What makes two fractions "equivalent"? - How do you set up an equation using information from a word problem? - What is a prime number? Composite number? - How do you find the factor pairs for a whole number up to 100?

Core Instructional & Supplemental Materials

Suggested Activities/Resources:	Varied Levels of Text:
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Modifications and Accommodations

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Economically Disadvantaged:
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Culturally Diverse:
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- Provide social/emotional support
- Respect cultural traditions
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- Communicate high expectations for the success of all students

Unit 3: Solve problems involving addition, subtraction, and multiplication of fractions. Properties of operations with multi-digit arithmetic	**Duration:** 39 Days

Standards/Learning Targets

New Jersey Student Learning Standards:
- **4.NF.B.3.a** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole number
- **4.NF.B.3.b**. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.
- **4.NF.3** Understand a fraction a/b with a > 1 as the sum of a fraction 1/b.

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- **4.NF.3.c.** Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
- **4.NF.3.d** . Solve word problems involving addition and subtraction of fractions to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
- **4.NF.B.4a,b** Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. a. Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4). b. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. In general, n × (a/b) = (n × a)/b.
- **4.NF.B.4.c** . Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.
- **4.MD.A.1** Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
- **4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- **4.NBT.B.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Standards for Mathematical Practice:
- MP.1 Make sense of problems and persevere in solving them.
- MP.2 Reason Abstractly and quantitatively.
- MP.3 Construct viable arguments and critique the reasoning of others.
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21st Century Themes/Career Readiness:
- CRP2. Apply appropriate academic and technical skills.
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- CRP7. Employ valid and reliable research strategies.
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Evidence of Student Learning

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Knowledge & Skills

Enduring Understandings:
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Use the four operations with whole numbers to solve problems.
- Use place value understanding and properties of operations to perform multi-digit arithmetic.

Essential Questions:
- What strategy will you use to figure out the pattern?
- How will we compare fractions using symbols?
- Why do we need to make the denominators the same in order to add?
- In what order do we complete a mixed fraction addition or subtraction problem?
- Why do we need to make sure we keep the denominator the same and only add or subtract the numerators?
- Where would you notice fractions in measurement?
- What do the letters in a word problem stand for?
- Why is it so important to line up numbers in a multi-digit addition or subtraction problem?

Core Instructional & Supplemental Materials

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- Give choice to provide a sense of control

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Economically Disadvantaged:
- Provide clear, achievable expectations, do not lower academic requirements for them.
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- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
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Culturally Diverse:
- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students

Unit 4: Extend Understanding of Fractions, Solve Word Problems, and Introduce Decimals.	Duration: 37 Days
Standards/Learning Targets	

New Jersey Student Learning Standards:
- **4.OA.A.3** Solve multistep word problems with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation & estimation strategies including rounding.
- **4.OA.C.5** Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even

numbers. Explain informally why the numbers will continue to alternate in this way.
- **4.NF.4.c** Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?
- **4.NF.C.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.
- **4.NF.C.6** Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.
- **4.NF.C.7** Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.
- **4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
- **4.MD.A.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.
- **4.MD.B.4** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions with the use of information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

Standards for Mathematical Practice:
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- MP.5 Use appropriate tools strategically.
- MP.6 Attend to precision.
- MP.7 Look for and make use of structure.

Interdisciplinary Connections:

Grade: 4	Content Area: Mathematics

Reading:

- **RI.4.4.** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

Speaking and Listening:

- **SL2.** Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
- **SL4.** Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

Writing:

- **W4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Technology Standards:
- 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
- C. Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- E: Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
- F: Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

21st Century Themes/Career Readiness:
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Evidence of Student Learning

Formative Tasks:	**Alternative Assessments:**
- Solve and Share - Quick Check quizzes - Daily Review - Cooperative group learning	- Performance Tasks - Student created models - Written/verbal explanations - Peer assessment

Grade: 4	Content Area: Mathematics

● Exit slips ● Analysis of student work ● Teacher observations/anecdotal/checklists ● Self-reflection ● Math journals	● Self-assessment
Summative Assessments: ● Topic tests ● Extension Projects ● Topic Performance Assessment	**Benchmark Assessments:** ● Pearson cumulative benchmark assessment ● Beginning of the year, mid year, and end of the year

Knowledge & Skills

Enduring Understandings:
- Generate and analyze patterns.
- Use the four operations with whole numbers to solve problems.
- Understand decimal notation for fractions, and compare decimal fractions.
- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Understand decimal notation for fractions, and compare decimal fractions.
- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Essential Questions:
- What visual models will help the students to understand that a/b is a multiple of 1/b?
- How can you model setting up an equation for multiplying a fraction by a whole number from a word problem?
- How do you show students how to make equivalent denominators (10 and 100)?
- What models could my students use to show fractions as decimals?
- How can your students apply the perimeter and area formulas for rectangles using word problems.
- How can you organize information into a line plot?
- What can my students use to represent an unknown variable when solving a word problem?
- What information about units of measurement do your students need to know in order to solve word problems including fractions and decimals?

Grade: 4	Content Area: Mathematics

Core Instructional & Supplemental Materials

Suggested Activities/Resources:
- Pearson Envision 2.0 2016
- Happy Numbers
- Reflex Math
- Gizmos
- Better Lessons
  - Number & Operations in Base Ten
  - Operations & Algebraic Thinkingl
- Achieve 3000
- ST Math

Varied Levels of Text:
- Marilyn Burns Math Libraries Grade 4-6
http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf

Modifications and Accommodations

English Language Learners:
- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ELL students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ELL students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

Special Education/504 Plans/Students with Disabilities:
- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation
- Differentiate tests to meet the needs of students
- Shorten tests and give in multiple sessions if needed
- Reteach/Review before giving assessments
- Read assessment directions for each section to student(s)
- Allow the use of tools such as a computer or iPad

Grade: 4	Content Area: Mathematics

- Allow the use of manipulatives such as counters during testing
- Highlight key parts of equations or word problems for student(s)
- Allow verbal answers
- Print tests with larger font
- Allow for extra time if needed/necessary

Students at Risk of Failure:
- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

Economically Disadvantaged:
- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

Culturally Diverse:
- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students

Grade: 4	Content Area: Mathematics

Unit 5: Compare decimals and measure/classify geometric figures	**Duration:** 30 Days

Standards/Learning Targets

New Jersey Student Learning Standards:
- **4.NBT.B.4** Fluently add and subtract multi-digit whole numbers using the standard algorithm.
- **4.MD.C.5a,b** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand the concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
- **4.MD.C.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
- **4.MD.C.7** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measures.
- **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- **4.G.A.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- **4.G.A.3** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Standards for Mathematical Practice:
- MP.1 Make sense of problems and persevere in solving them.
- MP.2 Reason Abstractly and quantitatively.
- MP.3 Construct viable arguments and critique the reasoning of others.
- MP.4 Model with mathematics.
- MP.5 Use appropriate tools strategically.

Interdisciplinary Connections:

Grade: 4	Content Area: Mathematics

Reading:

- **RI.4.4.** Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

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Technology Standards:
- 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
- A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations
- B. Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and processes using technology.
- C. Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- F: Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

21st Century Themes/Career Readiness:
- CRP2. Apply appropriate academic and technical skills.
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- CRP6. Demonstrate creativity and innovation.
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Evidence of Student Learning

Formative Tasks:
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Alternative Assessments:
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Grade: 4	Content Area: Mathematics

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Knowledge & Skills

Enduring Understandings: ● Geometric measurement: understand concepts of angle and measure angles. ● Use place value understanding and properties of operations to perform multi-digit arithmetic. ● Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	**Essential Questions:** ● What strategies can you use to measure an angle in degrees? ● What geometrical attributes do you need to teach your students to understand two-dimensional figures? ● How do you identify the difference between parallel lines, perpendicular lines, and right angles in two-dimensional figures? ● What characteristics do you need to teach about a protractor so your students can use the tool effectively? ● What information do students need to find the measurement of an unknown angle in word problems? ● Where do you draw a line of symmetry in a line-symmetric figure?

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Grade: 4	Content Area: Mathematics

○ [Operations & Algebraic Thinking](#)	

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Grade: 4	Content Area: Mathematics

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