

Operations & Algebraic Thinking		Strand: Use the four operations with whole numbers to solve problems.	
New Jersey Student Learning Standards:			
<p>4.OA.1. Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ 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.</p> <p>4.OA.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.</p> <p>4.OA.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.</p>			
Big Ideas:			
<ul style="list-style-type: none"> • Use multiplication equations to represent verbal statements of multiplicative comparison. • Give a multiplicative comparison statement when provided with multiplication equation. • Use appropriate operations to solve multiplicative comparison word problems – using drawings and equations. • Use four basic operations to solve multi-step word problems. • Use estimation strategies to determine reasonableness. 			
Essential Questions:		Enduring Understandings:	
<ul style="list-style-type: none"> • What patterns can we find in multiplication and division facts? • How are multiplication and division related to addition and subtraction? • How do you multiply whole numbers? • How can we use various strategies to solve a word problem? • How do you interpret remainders? • How do we use symbols to represent unknown quantities to solve word problems? 		<ul style="list-style-type: none"> • Computation involves taking apart and combining numbers using a variety of approaches. • Flexible methods of computation involve grouping numbers in strategic ways. • Patterns can be found in many forms. • Mathematical expressions represent relationships. • Number patterns and relationships can be represented using variables. • Estimation is a way to get an approximate answer. 	
Knowledge, Skills, and Instructional Objectives:			
<ul style="list-style-type: none"> • Translate verbal statements involving multiplication to numeric equations (vice versa). • Explain the commutative property of multiplication. • Write factors of a given product. • Solve word problems for an unknown factor using multiplication or division (use a symbol for the unknown factor). • Identify appropriate operations to solve word problems. • Compare multiplication to repeated addition. • Identify appropriate operations to solve word problems. • Solve multi-step word problems with whole numbers using all four operations. • Write an equation from a word problem using a letter to represent the unknown quantity. • Justify the reasonableness of solutions using estimation, mental computation, and rounding. • Interpret remainders in division word problems. 			
Instructional Materials/Resources:		Suggested Vocabulary	
<ul style="list-style-type: none"> • McGraw-Hill Mathematics <ul style="list-style-type: none"> ○ 4.OA.1 - Ch 4 ○ 4.OA.2 - Ch 4, 5, 6 ○ 4.OA.3 - Ch 1, 2, 4, 5, 6, 7 • Chapter File folder Daily Worksheets • Measuring Up – NJ ASK workbook • Teacher created materials • Problem on the Day/Warm Up Activities 		commutative property, division(divide), equations, inverse operations, multiplication(multiply), numeric equations, remainder, repeated addition, variable (unknown factor), verbal statements	
		Technology:	
		<ul style="list-style-type: none"> • Study Island • iPads • Safari Montage • Math websites 	

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Grade: 4th Grade Content Area: Mathematics

	<ul style="list-style-type: none"> • ActivBoard/Promethean Planet • Document camera <p>8.1.2.A.4; 8.1.P.C.1</p>
<p>Recommended Instructional Activities:</p> <ul style="list-style-type: none"> • Problem of the Day/Warm Up activity • Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards • practice and reteach worksheets – independent practice • Activboard activities (Promethean Planet) • Video clips (Safari Montage) 	
<p>Extension Strategies/Activities: Enrichment worksheets, students creating own problems to extend lesson</p>	
<p>Cross-curricular Connections/Standards: Connections are made throughout other subject areas. RI.4.4.; RI.4.7; NJLSA.W2; W.4.2</p> <p>21st Century Skills CRP1; CRP3; CRP6; CRP11; CRP12</p>	
<p>Suggested Assessments:</p> <ul style="list-style-type: none"> • Problem on the Day/Warm Up Activities • Chapter File folder Daily Worksheets • Check Your Progress A & B • Daily homework • Chapter Study Guide • Post Test • Teacher observation 	
<p>Operations & Algebraic Thinking</p>	<p>Strand: Gain familiarity with factors and multiples.</p>
<p>Common Core Standards:</p> <p>4.OA.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.</p>	
<p>Big Ideas:</p> <ul style="list-style-type: none"> • Factor whole numbers from 1-100. • Identify prime and composite numbers, from 1-100. 	
<p>Essential Questions:</p> <ul style="list-style-type: none"> • What are the factors of a number? • What makes a number prime or composite? • How can numbers be broken down into its smallest factors? • How do you find the prime factors and multiples of a number? 	<p>Enduring Understandings:</p> <ul style="list-style-type: none"> • A whole number is a multiple of each of its factors.
<p>Knowledge, Skills, and Instructional Objectives:</p> <ul style="list-style-type: none"> • Identify all the factor pairs for a whole number in the range 1 - 100. • Explain the relationship between a whole number and its factors. • Determine if a whole number is a multiple of a given one digit number. • Determine if a whole number is prime or composite. 	
<p>Instructional Materials/Resources:</p> <ul style="list-style-type: none"> • McGraw-Hill Mathematics <ul style="list-style-type: none"> ○ 4.OA.4 - Ch 4 	<p>Suggested Vocabulary composite, factor pairs, factors, multiples, prime</p> <p>Technology:</p>

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<ul style="list-style-type: none"> • Chapter File folder Daily Worksheets • Measuring Up – NJ ASK workbook • Teacher created materials • Problem on the Day/Warm Up Activities 	<ul style="list-style-type: none"> • Study Island • iPads • Safari Montage • Math websites • ActivBoard/Promethean Planet • Document camera <p>8.1.2.A.4; 8.1.P.C.1</p>
<p>Recommended Instructional Activities:</p> <ul style="list-style-type: none"> • Problem of the Day/Warm Up activity • Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards • practice and reteach worksheets – independent practice • Activboard activities (Promethean Planet) • Video clips (Safari Montage) 	
<p>Extension Strategies/Activities: Enrichment worksheets, students creating own problems to extend lesson</p>	
<p>Cross-curricular Connections/Standards: Connections are made throughout other subject areas. RI.4.4.; RI.4.7; NJLSA.W2; W.4.2</p> <p>21st Century Skills CRP1; CRP3; CRP6; CRP11; CRP12</p>	
<p>Suggested Assessments:</p> <ul style="list-style-type: none"> • Problem on the Day/Warm Up Activities • Chapter File folder Daily Worksheets • Check Your Progress A & B • Daily homework • Chapter Study Guide • Post Test • Teacher observation 	
<p>Operations & Algebraic Thinking</p>	<p>Strand: Generate and analyze patterns.</p>
<p>Common Core Standards:</p> <p>4.OA.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. <i>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.</i></p>	
<p>Big Ideas:</p> <ul style="list-style-type: none"> • Recognize, describe, and extend patterns. 	
<p>Essential Questions:</p> <ul style="list-style-type: none"> • What patterns can we find in multiplication and division facts? 	<p>Enduring Understandings:</p> <ul style="list-style-type: none"> • Patterns can be found in many forms. • Patterns can grow and repeat. • Patterns can be generalized.
<p>Knowledge, Skills, and Instructional Objectives:</p> <ul style="list-style-type: none"> • Generate a number or shape pattern that follows a given rule. • Draw conclusions regarding the features of the pattern not directly related to the rule. • Identify the pattern or rule for a given set of numbers or shapes. 	
<p>Instructional Materials/Resources:</p> <ul style="list-style-type: none"> • McGraw-Hill Mathematics • Chapter File folder Daily Worksheets • Measuring Up – NJ ASK workbook 	<p>Suggested Vocabulary input/output, pattern, rule</p> <p>Technology:</p> <ul style="list-style-type: none"> • Study Island

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<ul style="list-style-type: none">• Teacher created materials• Problem on the Day/Warm Up Activities	<ul style="list-style-type: none">• iPads• Safari Montage• Math websites• ActivBoard/Promethean Planet• Document camera 8.1.2.A.4; 8.1.P.C.1
<p>Recommended Instructional Activities:</p> <ul style="list-style-type: none">• Problem of the Day/Warm Up activity• Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards• practice and reteach worksheets – independent practice• Activboard activities (Promethean Planet)• Video clips (Safari Montage)	
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<p>Modifications for SpEd/ELL/Students at Risk/Gifted Supports, Accommodations, and Modifications must be provided as stated in IEP,504 Plan, or I-Team Intervention Plan , and may include (but not limited to) the following:</p> <p>Presentation accommodations:</p> <ul style="list-style-type: none">• Listen to audio recordings instead of reading text• Learn content from audio books, movies, videos and digital media instead of reading print versions• Use alternate texts at lower readability level• Work with fewer items per page or line and/or materials in a larger print size• Use magnification device, screen reader, or Braille/Nemeth Code• Use audio amplification device (e.g., hearing aid (s) , auditory trainer, sound-field system (which may require teacher use of microphone)• Be given a written list of instructions• Record a lesson, instead of taking notes• Have another student share class notes with him• Be given an outline of a lesson• Be given a copy of teachers' lecture notes• Be given a study guide to assist in preparing for assessments• Use visual presentations of verbal material, such as word webs and visual organizers• Use manipulatives to teach or demonstrate concepts• Have curriculum materials translated into native language <p>Response accommodations:</p> <ul style="list-style-type: none">• Use sign language, a communication device, Braille, other technology, or native language other than English• Dictate answers to scribe	

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- Capture responses on an audio recorder
- Use a spelling dictionary or electronic spell-checker
- Use a word processor to type notes or give responses in class
- Use a calculator or table of “math facts”
- Respond directly in the test booklet rather than on an answer sheet.

Setting accommodations:

- Work or take a test in a different setting, such as a quiet room with few distractions
- Sit where he learns best (for example, near the teacher, away from distractions)
- Use special lighting or acoustics
- Take a test in a small group setting
- Use sensory tools such as an exercise band that can be looped around a chair’s legs (so fidgety kids can kick it and quietly get their energy out)
- Use noise buffers such as headphones, earphones, or earplugs

Timing accommodations:

- Take more time to complete a task or a test
- Have extra time to process oral information and directions
- Take frequent breaks, such as after completing task

Scheduling accommodations:

- Take more time to complete a project
- Take a test in several timed sessions or over several days
- Take sections of a test in a different order
- Take a test at a specific time of day

Organization skills accommodations:

- Use an alarm to help with time management
- Mark texts with a highlighter
- Have help coordination assignments in a book or planner
- Receive study skills instruction

Assignment modifications:

- Complete fewer or different homework problems than peers
- Write shorter papers
- Answer fewer or different test questions
- Create alternate projects or assignments

Curriculum modifications:

- Learn different material (such as continuing to work on multiplication while classmates move on to fractions, or moving ahead to an extension concept/skill while classmates continue to work on a core skill)

¹ See Glossary, Table 2.

² Students need not use formal terms for these properties.

³ This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order.

Number & Operations in Base Ten¹		Strand: Generalize place value understanding for multi-digit whole numbers.
New Jersey Student Learning Standards:		
<p>4.NBT.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. <i>For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</i></p> <p>4.NBT.2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p> <p>4.NBT.3. Use place value understanding to round multi-digit whole numbers to any place.</p>		
Big Ideas:		
<ul style="list-style-type: none"> • Demonstrate an understanding of place value concepts. • Compare and order whole numbers using $>$, $<$ and $=$. • Read and write multi-digit numbers – using standard form, word form, and expanded form. • Round whole numbers to a given place value. 		
Essential Questions:	Enduring Understandings:	
<ul style="list-style-type: none"> • How does the position of a digit in a number affect its value? • In what ways can numbers be composed and decomposed? • How can I represent the expanded notation of numbers? • How can I use models, word, and expanded formulas to order and compare numbers? • How are place value patterns repeated in large numbers? 	<ul style="list-style-type: none"> • Place value is based on groups of ten. • Read and write numbers using standard form, word form, and expanded form. 	
Knowledge, Skills, and Instructional Objectives:		
<ul style="list-style-type: none"> • Identify place value of a multi-digit whole number up to millions. • Define a number in one place as 10 times its value in the place to its right. • Read and write whole numbers in standard form, word form, and expanded form up to one million. • Compare and order whole numbers using $<$, $>$, $=$ up to one million. • Compare and order whole numbers based on the meaning of place value. • Explain rules for rounding. • Round multi-digit whole numbers up to a million to any place value. 		
Instructional Materials/Resources:	Suggested Vocabulary	
<ul style="list-style-type: none"> • McGraw-Hill Mathematics <ul style="list-style-type: none"> ○ 4.NBT.1. - Ch 6, 7 ○ 4.NBT.2. - Ch 1 ○ 4.NBT.3. - Ch 1 • Chapter File folder Daily Worksheets • Measuring Up – NJ ASK workbook • Teacher created materials • Picture books 	compare, digit, equal to, greater than, less than, place value, standard form Technology: <ul style="list-style-type: none"> • Study Island • iPads • Safari Montage • Math websites • ActivBoard/Promethean Planet • Document camera 8.1.2.A.4; 8.1.P.C.1	
Recommended Instructional Activities:		
<ul style="list-style-type: none"> • Problem of the Day/Warm Up activity • Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards • practice and reteach worksheets – independent practice • Activboard activities (Promethean Planet) • Video clips (Safari Montage) 		

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Extension Strategies/Activities:

Enrichment worksheets, students creating own problems to extend lesson

Cross-curricular Connections/Standards:

Connections are made throughout other subject areas.

RI.4.4.; RI.4.7; NJLSA.W2; W.4.2

21st Century Skills

CRP1; CRP3; CRP6; CRP11; CRP12

Suggested Assessments:

- Problem on the Day/Warm Up Activities
- Chapter File folder Daily Worksheets
- Check Your Progress A & B
- Daily homework
- Chapter Study Guide
- Post Test
- Teacher observation

Number & Operations in Base Ten¹

Strand: Use place value understanding and properties of operations to perform multi-digit arithmetic.

Common Core Standards:

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

4.NBT.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.6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the 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.

Big Ideas:

- Use pencil and paper to correctly add and subtract multi-digit numbers.
- Multiply a multi-digit number by one or two digits.
- Discuss strategies to solve multiplication problems.
- Divide and multi-digit number by one number.
- Discuss strategies to solve division problems.

Essential Questions:

- How can knowing addition and subtractions facts help me?
- What strategies do I use to find the sums or differences of two whole numbers?
- How do you multiply whole numbers?
- How can I use the array model to explain multiplication?
- How can I use what I know about repeated subtraction, equal sharing, and forming equal groups to solve division problems?

Enduring Understandings:

- Computation involves taking apart and combining numbers using a variety of approaches.
- Proficiency with basic facts aids estimation and computation of larger and smaller numbers.

Knowledge, Skills, and Instructional Objectives:

- Add and subtract fluently within 1,000,000 (apply fluency with basic math facts in columns)
- Multiply whole numbers up to 4-digit by 1-digit and 2-digit by 2-digit using place value strategies and properties of operations.
- Illustrate and explain multiplication calculations through equations, rectangular arrays, and/or area models.
- Divide whole numbers with up to 4-digit dividends and 1-digit divisors; quotients may contain remainders.
- Draw and explain calculations through equations, rectangular arrays, and/or area models.
- Divide whole numbers using strategies based on place value, properties of operations, and the relationships between multiplication

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and division.	
Instructional Materials/Resources: <ul style="list-style-type: none">• McGraw-Hill Mathematics<ul style="list-style-type: none">○ 4.NBT.4. - Ch 2○ 4.NBT.5. - Ch 5, 6○ 4.NBT.6. - Ch 7• Chapter File folder Daily Worksheets• Measuring Up – NJ ASK workbook• Teacher created materials	Suggested Vocabulary area models, dividend, divisor, equations, expanded form, multiply, order of operations, place value names, quotient, rectangular arrays, remainder, rounding, standard algorithm, word form Technology: <ul style="list-style-type: none">• Study Island• iPads• Safari Montage• Math websites• ActivBoard/Promethean Planet• Document camera 8.1.2.A.4; 8.1.P.C.1
Recommended Instructional Activities: <ul style="list-style-type: none">• Problem of the Day/Warm Up activity• Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards• practice and reteach worksheets – independent practice• Activboard activities (Promethean Planet)• Video clips (Safari Montage)	
Extension Strategies/Activities: Enrichment worksheets, students creating own problems to extend lesson	
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- Use visual presentations of verbal material, such as word webs and visual organizers
- Use manipulatives to teach or demonstrate concepts
- Have curriculum materials translated into native language

Response accommodations:

- Use sign language, a communication device, Braille, other technology, or native language other than English
- Dictate answers to scribe
- Capture responses on an audio recorder
- Use a spelling dictionary or electronic spell-checker
- Use a word processor to type notes or give responses in class
- Use a calculator or table of “math facts”
- Respond directly in the test booklet rather than on an answer sheet.

Setting accommodations:

- Work or take a test in a different setting, such as a quiet room with few distractions
- Sit where he learns best (for example, near the teacher, away from distractions)
- Use special lighting or acoustics
- Take a test in a small group setting
- Use sensory tools such as an exercise band that can be looped around a chair’s legs (so fidgety kids can kick it and quietly get their energy out)
- Use noise buffers such as headphones, earphones, or earplugs

Timing accommodations:

- Take more time to complete a task or a test
- Have extra time to process oral information and directions
- Take frequent breaks, such as after completing task

Scheduling accommodations:

- Take more time to complete a project
- Take a test in several timed sessions or over several days
- Take sections of a test in a different order
- Take a test at a specific time of day

Organization skills accommodations:

- Use an alarm to help with time management
- Mark texts with a highlighter
- Have help coordination assignments in a book or planner
- Receive study skills instruction

Assignment modifications:

- Complete fewer or different homework problems than peers
- Write shorter papers
- Answer fewer or different test questions
- Create alternate projects or assignments

Curriculum modifications:

- Learn different material (such as continuing to work on multiplication while classmates move on to fractions, or moving ahead to an extension concept/skill while classmates continue to work on a core skill)

Number & Operations—Fractions¹		Strand: Extend understanding of fraction equivalence and ordering.
New Jersey Student Learning Standards:		
<p>4.NF.1. Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ 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.</p> <p>4.NF.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.</p>		
Big Ideas:		
<ul style="list-style-type: none"> Use visual models to relate whole numbers, commonly used fractions, and decimals to each other, and to represent equivalent forms of the same number. Compare and order fractions with like and unlike denominators using benchmark fractions. 		
Essential Questions:	Enduring Understandings:	
<ul style="list-style-type: none"> How do we write fractions in simplest form? What are equivalent fractions, and how do we calculate them? How do you compare fractions with like and unlike denominators? 	<ul style="list-style-type: none"> Fractions represent a relationship between two numbers. Equivalent fractions represent the same fractional part, even though the numbers are different. Comparing fractions are only valid when they are compared to the same whole. 	
Knowledge, Skills, and Instructional Objectives:		
<ul style="list-style-type: none"> Calculate equivalent fractions. Draw a fraction model to identify equivalent fractions. Explain why multiplying a fraction by an equivalent form of 1 ($2/2$, $3/3$, etc) results in an equivalent fraction. Compare and order two fractions with unlike numerators and denominators by creating common denominators or common numerators. Compare and order two fractions with unlike numerators and denominators by comparing them to benchmark fractions. Explain that comparisons between two fractions are only valid when referring to the same whole. Record comparisons between fractions with less than, greater than, or equal to symbols. Justify comparison between two fractions using a visual fraction model. 		
Instructional Materials/Resources:	Suggested Vocabulary	
<ul style="list-style-type: none"> McGraw-Hill Mathematics <ul style="list-style-type: none"> 4.NF.1- Ch 11 4.NF.2- Ch 11 Chapter File folder Daily Worksheets Measuring Up – NJ ASK workbook Teacher created materials 	benchmark fractions, denominator (common denominator), equal to, fraction, greater than, less than, lowest terms, numerator, visual fraction model	
	Technology:	
	<ul style="list-style-type: none"> Study Island iPads Safari Montage Math websites ActivBoard/Promethean Planet Document camera 8.1.2.A.4; 8.1.P.C.1	
Recommended Instructional Activities:		
<ul style="list-style-type: none"> Problem of the Day/Warm Up activity Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards practice and reteach worksheets – independent practice Activboard activities (Promethean Planet) Video clips (Safari Montage) 		
Extension Strategies/Activities:		
Enrichment worksheets, students creating own problems to extend lesson		

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Cross-curricular Connections/Standards:

Connections are made throughout other subject areas.

RI.4.4.; RI.4.7; NJLSA.W2; W.4.2

21st Century Skills

CRP1; CRP3; CRP6; CRP11; CRP12

Suggested Assessments:

- Problem on the Day/Warm Up Activities
- Chapter File folder Daily Worksheets
- Check Your Progress A & B
- Daily homework
- Chapter Study Guide
- Post Test
- Teacher observation

Number & Operations in Base Ten¹

Strand: Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Common Core Standards:

4.NF.3. Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.

- Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- 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. *Examples:* $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$.
- 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.
- Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

4.NF.4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

- 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 $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$.*
- 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 $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$.)*
- 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?*

Big Ideas:

- Read, write, and model fractions.
- Add/subtract fractions.
- Decompose fractions – write equation for the fraction and use visual fraction model.
- Add/subtract mixed numbers.
- Use concrete models to explore addition and subtraction word problems.
- Use models to understand how to multiply a fraction by a whole number.
- Use fraction models and equations to solve word problems.

Essential Questions:

- How do you add and subtract fractions?
- How do we add and subtract fractions and mixed numbers?
- How do you multiply a fraction by a whole number?

Enduring Understandings:

- Adding fractions is joining parts of the same whole.
- Subtracting fractions is separating parts of a whole.
- Add and subtract mixed fractions using properties of operations.
- Multiply fractions by whole numbers by using

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		decomposition.
<p>Knowledge, Skills, and Instructional Objectives:</p> <ul style="list-style-type: none"> • Explain adding fractions as joining parts of the same whole. • Explain subtracting fractions as separating parts of the same whole. • Rewrite a fraction into a sum of smaller fractions with the same denominator. • Write each decomposition as an equation. • Explain why rewriting a fraction is equivalent to the original fraction by using a visual fraction model. • Add mixed numbers with like denominators using properties of operations, equivalent fractions, and the relationship between addition and subtraction. • Subtract mixed numbers with like denominators using properties of operations, equivalent fractions, and the relationship between addition and subtraction. • Convert mixed numbers to improper fractions to add and subtract fractions with like denominators. • Identify the operation needed to solve a word problem. • Solve word problems that involve addition and subtraction of fractions with like denominators referring to the same whole. • Draw visual fraction models or create equations to representing word problems. • Identify the relationship between repeated addition and multiplication. • Generate multiples of the fraction $1/b$. • Multiply a fraction by a whole number by decomposing the fraction as the numerator multiplied by the unit fraction of its denominator. • Create a numeric expression from a word problem involving the multiplication of a whole number and a fraction. • Solve word problems involving the multiplication of whole numbers and fractions. • Identify between what two whole numbers the solution lies. 		
<p>Instructional Materials/Resources:</p> <ul style="list-style-type: none"> • McGraw-Hill Mathematics <ul style="list-style-type: none"> ◦ 4.NF.3- Ch 12 • Chapter File folder Daily Worksheets • Measuring Up – NJ ASK workbook • Teacher created materials 	<p>Suggested Vocabulary addition, decomposition, difference, equation, equivalent fraction, fractions, improper fraction, mixed number, multiple, multiply, part, product, properties of operations, subtraction, sum, total, unit fraction, visual fraction model, whole numbers</p>	
	<p>Technology:</p> <ul style="list-style-type: none"> • Study Island • iPads • Safari Montage • Math websites • ActivBoard/Promethean Planet • Document camera <p>8.1.2.A.4; 8.1.P.C.1</p>	
<p>Recommended Instructional Activities:</p> <ul style="list-style-type: none"> • Problem of the Day/Warm Up activity • Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards • practice and reteach worksheets – independent practice • Activboard activities (Promethean Planet) • Video clips (Safari Montage) 		
<p>Extension Strategies/Activities: Enrichment worksheets, students creating own problems to extend lesson</p>		
<p>Cross-curricular Connections/Standards: Connections are made throughout other subject areas. RI.4.4.; RI.4.7; NJLSA.W2; W.4.2</p> <p>21st Century Skills CRP1; CRP3; CRP6; CRP11; CRP12</p>		
<p>Suggested Assessments:</p> <ul style="list-style-type: none"> • Problem on the Day/Warm Up Activities • Chapter File folder Daily Worksheets 		

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Grade: 4th Grade Content Area: Mathematics

<ul style="list-style-type: none"> • Check Your Progress A & B • Daily homework • Chapter Study Guide • Post Test • Teacher observation 	
<p>Number & Operations in Base Ten¹</p>	<p>Strand: Understand decimal notation for fractions, and compare decimal fractions.</p>
<p>Common Core Standards:</p> <p>4.NF.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 100.² <i>For example, express $\frac{3}{10}$ as $\frac{30}{100}$, and add $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$.</i></p> <p>4.NF.6. Use decimal notation for fractions with denominators 10 or 100. <i>For example, rewrite 0.62 as $\frac{62}{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</i></p> <p>4.NF.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.</p>	
<p>Big Ideas:</p> <ul style="list-style-type: none"> • Represent equivalent fractions through addition equations. • Translate decimals to fractions. • Compare and orders decimals using $<$, $>$, and $=$. 	
<p>Essential Questions:</p> <ul style="list-style-type: none"> • What does a decimal represent? • How do we read and write decimals? • How do we compare decimals? 	<p>Enduring Understandings:</p> <ul style="list-style-type: none"> • Fractions with a denominator of 10 can be expressed with a denominator of 100. • Fractions with denominators or 10 and 100 can be written as decimals. • Comparisons between decimals are only valid when referring to the same whole.
<p>Knowledge, Skills, and Instructional Objectives:</p> <ul style="list-style-type: none"> • Convert fractions with a denominator of 10 to an equivalent fraction with a denominator of 100. • Add two fractions with denominators of 10 and 100. • Convert fractions with denominators of 10 and 100 to decimals. • Locate decimals on a number line. • Describe lengths in decimal form. • Compare and order decimals to hundredths. • Draw a visual model to reason about the size of decimals. • Explain that comparisons between two decimals are only valid when referring to the same whole. • Compare decimals using greater than, less than, and equal to symbols. 	
<p>Instructional Materials/Resources:</p> <ul style="list-style-type: none"> • McGraw-Hill Mathematics <ul style="list-style-type: none"> ○ 4.NF.5- Ch 12, 13 ○ 4.NF.6- Ch 13 ○ 4.NF.7- Ch 13 • Chapter File folder Daily Worksheets • Measuring Up – NJ ASK workbook • Teacher created materials 	<p>Suggested Vocabulary add, decimal, denominator, equivalent fractions, fraction, greater than, hundredths, less than, number line, numerator, tenths</p> <p>Technology:</p> <ul style="list-style-type: none"> • Study Island • iPads • Safari Montage • Math websites • ActivBoard/Promethean Planet • Document camera <p>8.1.2.A.4; 8.1.P.C.1</p>
<p>Recommended Instructional Activities:</p> <ul style="list-style-type: none"> • Problem of the Day/Warm Up activity • Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards 	

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- practice and reteach worksheets – independent practice
- Activboard activities (Promethean Planet)
- Video clips (Safari Montage)

Extension Strategies/Activities:

Enrichment worksheets, students creating own problems to extend lesson

Cross-curricular Connections/Standards:

Connections are made throughout other subject areas.

RI.4.4.; RI.4.7; NJLSA.W2; W.4.2

21st Century Skills

CRP1; CRP3; CRP6; CRP11; CRP12

Suggested Assessments:

- Problem on the Day/Warm Up Activities
- Chapter File folder Daily Worksheets
- Check Your Progress A & B
- Daily homework
- Chapter Study Guide
- Post Test
- Teacher observation

Modifications for SpEd/ELL/Students at Risk/Gifted

Supports, Accommodations, and Modifications must be provided as stated in IEP,504 Plan, or I-Team Intervention Plan , and may include (but not limited to) the following:

Presentation accommodations:

- Listen to audio recordings instead of reading text
- Learn content from audio books, movies, videos and digital media instead of reading print versions
- Use alternate texts at lower readability level
- Work with fewer items per page or line and/or materials in a larger print size
- Use magnification device, screen reader, or Braille/Nemeth Code
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- Be given a written list of instructions
- Record a lesson, instead of taking notes
- Have another student share class notes with him
- Be given an outline of a lesson
- Be given a copy of teachers' lecture notes
- Be given a study guide to assist in preparing for assessments
- Use visual presentations of verbal material, such as word webs and visual organizers
- Use manipulatives to teach or demonstrate concepts
- Have curriculum materials translated into native language

Response accommodations:

- Use sign language, a communication device, Braille, other technology, or native language other than English
- Dictate answers to scribe
- Capture responses on an audio recorder
- Use a spelling dictionary or electronic spell-checker
- Use a word processor to type notes or give responses in class
- Use a calculator or table of "math facts"
- Respond directly in the test booklet rather than on an answer sheet.

Setting accommodations:

- Work or take a test in a different setting, such as a quiet room with few distractions
- Sit where he learns best (for example, near the teacher, away from distractions)
- Use special lighting or acoustics

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- Take a test in a small group setting
- Use sensory tools such as an exercise band that can be looped around a chair's legs (so fidgety kids can kick it and quietly get their energy out)
- Use noise buffers such as headphones, earphones, or earplugs

Timing accommodations:

- Take more time to complete a task or a test
- Have extra time to process oral information and directions
- Take frequent breaks, such as after completing task

Scheduling accommodations:

- Take more time to complete a project
- Take a test in several timed sessions or over several days
- Take sections of a test in a different order
- Take a test at a specific time of day

Organization skills accommodations:

- Use an alarm to help with time management
- Mark texts with a highlighter
- Have help coordination assignments in a book or planner
- Receive study skills instruction

Assignment modifications:

- Complete fewer or different homework problems than peers
- Write shorter papers
- Answer fewer or different test questions
- Create alternate projects or assignments

Curriculum modifications:

- Learn different material (such as continuing to work on multiplication while classmates move on to fractions, or moving ahead to an extension concept/skill while classmates continue to work on a core skill)

¹ Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, 100.

² Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.

Measurement & Data	Strand: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
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New Jersey Learning Standards:

4.MD.1. Know relative sizes of measurement units within one system of units including km, m, cm, mm; 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. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...*

4.MD.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.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.*

Big Ideas:

- Comparing measurements.
- Convert measurements and display data using a table.
- Identify the units of measurement within one system.
- Select and use appropriate standard units of measure and measurement tools to solve real-life problems.
- Distinguish between perimeter and area and use each appropriately in problem-solving situation.

Essential Questions:

- How do you use weight and measurement in your life?
- What are the tools of measurement and how are they used?
- What tools and units are used to measure the attributes of an object?
- How are the units of measure within a standard system related?
- How do you decide which unit of measurement to use?
- What types of problems are solved with measurement?
- How do I determine the duration of time in intervals of hours?
- How do I determine how much time has passed between events?
- How do you find perimeter and area of geometric figures?
- How can patterns be used to determine standard formulas for area and perimeter?
- How can we use measurement to plan and solve real life problems?
- Why is it important to understand conversions of measurement?

Enduring Understandings:

- Objects have distinct attributes that can be measured.
- Standard units provide common language for measurement.
- The choice of measurement tools depends on the measurable attribute and the degree of precision required.
- Measurement is a lifelong skill that can be applied to real life situations.

Knowledge, Skills, and Instructional Objectives:

- Order units of measurement within a given system.
- Convert larger units of measurement to smaller units of measurement within a given system, and in order to solve word problems.
- Construct a conversion table to record equivalent measurements of two units within a given system.
- Write measurement equivalents as a set of ordered pairs.
- Identify the operation(s) needed to solve a word problem.
- Solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money.
- Compare number line to a measurement scale.
- Calculate the area and perimeter for rectangles in word problems.

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<ul style="list-style-type: none">Solve word problems involving finding the missing factor/side of an area problem.	
Instructional Materials/Resources: <ul style="list-style-type: none">McGraw-Hill Mathematics<ul style="list-style-type: none">4.MD.1– Ch 3, 94.MD.2 – Ch 3, 94.MD.3 – Ch 10Chapter File folder Daily WorksheetsMeasuring Up – NJ ASK workbookTeacher created materials	Suggested Vocabulary <p>area, capacity, conversion table, customary/standard units, elapsed time, formula, length, mass, metric units, perimeter, rectangle, square unit, time intervals, volume, weight, width</p> Technology: <ul style="list-style-type: none">Study IslandiPadsSafari MontageMath websitesActivBoard/Promethean PlanetDocument camera 8.1.2.A.4; 8.1.P.C.1
Recommended Instructional Activities: <ul style="list-style-type: none">Problem of the Day/Warm Up activityTextbook activities – direct instruction, cooperative group activities, partner share, games, white boardspractice and reteach worksheets – independent practiceActivboard activities (Promethean Planet)Video clips (Safari Montage)Using a number line to a measurement scale: draw typical number line, 0-10, or compare to rule. Use number line to show 24 hours in a day, numbering 0-24, or minutes in an hour – numbering 0-60.	
Extension Strategies/Activities: <p>Enrichment worksheets, students creating own problems to extend lesson</p>	
Cross-curricular Connections/Standards: <p>Connections are made throughout other subject areas. RI.4.4.; RI.4.7; NJLSA.W2; W.4.2</p> <p>21st Century Skills CRP1; CRP3; CRP6; CRP11; CRP12</p>	
Suggested Assessments: <ul style="list-style-type: none">Problem on the Day/Warm Up ActivitiesChapter File folder Daily WorksheetsCheck Your Progress A & BDaily homeworkChapter Study GuidePost TestTeacher observation	
Measurement & Data	Strand: Represent and interpret data.
Common Core Standards: 4.MD.4. Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. <i>For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection..</i>	
Big Ideas: <ul style="list-style-type: none">Create a number line, divide and label into fractional units.Use a number line to solve addition and subtraction word problems.Read, interpret, construct, analyze, generate questions about and draw inferences from displays of data.	
Essential Questions: <ul style="list-style-type: none">How can you construct a number line and divide it into fraction units?How can you use a number line to solve addition and subtractions word problems?	Enduring Understandings: <ul style="list-style-type: none">Graphs convey data in a concise way.Data displayed on a line plot can be used to solve addition and subtraction problems.

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Grade: 4th Grade Content Area: Mathematics

<ul style="list-style-type: none">• What inferences can you draw from a line plot?	
Knowledge, Skills, and Instructional Objectives: <ul style="list-style-type: none">• Construct a line plot to display data of fractional measurements.• Compare data displayed in the line plot to solve addition and subtraction problems.• Identify the appropriate operation needed to solve a word problem.	
Instructional Materials/Resources: <ul style="list-style-type: none">• McGraw-Hill Mathematics• Chapter File folder Daily Worksheets• Measuring Up – NJ ASK workbook• Teacher created materials	Suggested Vocabulary fractions, line plot Technology: <ul style="list-style-type: none">• Study Island• iPads• Safari Montage• Math websites• ActivBoard/Promethean Planet• Document camera 8.1.2.A.4; 8.1.P.C.1
Recommended Instructional Activities: <ul style="list-style-type: none">• Problem of the Day/Warm Up activity• Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards• practice and reteach worksheets – independent practice• Activboard activities (Promethean Planet)• Video clips (Safari Montage)	
Extension Strategies/Activities: Enrichment worksheets, students creating own problems to extend lesson	
Cross-curricular Connections/Standards: Connections are made throughout other subject areas. RI.4.4.; RI.4.7; NJSLA.W2; W.4.2 21 st Century Skills CRP1; CRP3; CRP6; CRP11; CRP12	
Suggested Assessments: <ul style="list-style-type: none">• Problem on the Day/Warm Up Activities• Chapter File folder Daily Worksheets• Check Your Progress A & B• Daily homework• Chapter Study Guide• Post Test• Teacher observation	

Measurement & Data	Strand: Geometric measurement: understand concepts of angle and measure angles.
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Common Core Standards:

4.MD.5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:

- 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.
- An angle that turns through n one-degree angles is said to have an angle measure of n degrees.

4.MD.6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

4.MD.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 measure.

Big Ideas:

- Use a protractor to measure and draw angles.

Essential Questions:

- How are angles measured?
- How do you find an unknown angle?
- How are angles classified?

Enduring Understandings:

- Angles are measured using a protractor, 0° - 360° .
- Use addition and subtraction to find missing angle measure.
- Angles are classified by their degree – acute, right, obtuse.

Knowledge, Skills, and Instructional Objectives:

- Measure angles with a protractor (half circle protractors and full circle protractors).
- Define a “one degree angle” as an angle that turns $1/360$ of a circle.
- Define an angle measure as the fraction of the circular arc between two rays with a common endpoint.
- Calculate n one-degree angles as having a measurement of n degrees.
- Measure angles of n degrees.
- Measure angles with whole number degrees using a protractor.
- Sketch angles of a given measurement.
- Define an angle measure as the sum of its non-overlapping parts.
- Solve addition and subtraction problems to find the unknown angle in a diagram.
- Create an algebraic expression in order to solve for a missing angle measure.
- Identify the appropriate operation needed to solve a word problem.

Instructional Materials/Resources:

- McGraw-Hill Mathematics
 - **4.MD.5** – Ch 10
- Chapter File folder Daily Worksheets
- Measuring Up – NJ ASK workbook
- Teacher created materials
- Picture books

Suggested Vocabulary

angle, angle measure, circle, circular arc, degree (angle measure), endpoints, intersecting lines, N degrees, “one degree angle”, points, protractor, rays, straight

Technology:

- Study Island
- iPads
- Safari Montage
- Math websites
- ActivBoard/Promethean Planet
- Document camera

8.1.2.A.4; 8.1.P.C.1

Recommended Instructional Activities:

- Problem of the Day/Warm Up activity
- Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards
- practice and reteach worksheets – independent practice
- Activboard activities (Promethean Planet)
- Video clips (Safari Montage)

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Extension Strategies/Activities:

Enrichment worksheets, students creating own problems to extend lesson

Cross-curricular Connections/Standards:

Connections are made throughout other subject areas.

RI.4.4.; RI.4.7; NJSLSA.W2; W.4.2

21st Century Skills

CRP1; CRP3; CRP6; CRP11; CRP12

Suggested Assessments:

- Problem on the Day/Warm Up Activities
- Chapter File folder Daily Worksheets
- Check Your Progress A & B
- Daily homework
- Chapter Study Guide
- Post Test
- Teacher observation

Modifications for SpEd/ELL/Students at Risk/Gifted

Supports, Accommodations, and Modifications must be provided as stated in IEP,504 Plan, or I-Team Intervention Plan , and may include (but not limited to) the following:

Presentation accommodations:

- Listen to audio recordings instead of reading text
- Learn content from audio books, movies, videos and digital media instead of reading print versions
- Use alternate texts at lower readability level
- Work with fewer items per page or line and/or materials in a larger print size
- Use magnification device, screen reader, or Braille/Nemeth Code
- Use audio amplification device (e.g., hearing aid (s) , auditory trainer, sound-field system (which may require teacher use of microphone)
- Be given a written list of instructions
- Record a lesson, instead of taking notes
- Have another student share class notes with him
- Be given an outline of a lesson
- Be given a copy of teachers' lecture notes
- Be given a study guide to assist in preparing for assessments
- Use visual presentations of verbal material, such as word webs and visual organizers
- Use manipulatives to teach or demonstrate concepts
- Have curriculum materials translated into native language

Response accommodations:

- Use sign language, a communication device, Braille, other technology, or native language other than English
- Dictate answers to scribe
- Capture responses on an audio recorder
- Use a spelling dictionary or electronic spell-checker
- Use a word processor to type notes or give responses in class
- Use a calculator or table of "math facts"
- Respond directly in the test booklet rather than on an answer sheet.

Setting accommodations:

- Work or take a test in a different setting, such as a quiet room with few distractions
- Sit where he learns best (for example, near the teacher, away from distractions)
- Use special lighting or acoustics
- Take a test in a small group setting
- Use sensory tools such as an exercise band that can be looped around a chair's legs (so fidgety kids can kick it and quietly get their energy out)
- Use noise buffers such as headphones, earphones, or earplugs

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Grade: 4th Grade Content Area: Mathematics

Timing accommodations:

- Take more time to complete a task or a test
- Have extra time to process oral information and directions
- Take frequent breaks, such as after completing task

Scheduling accommodations:

- Take more time to complete a project
- Take a test in several timed sessions or over several days
- Take sections of a test in a different order
- Take a test at a specific time of day

Organization skills accommodations:

- Use an alarm to help with time management
- Mark texts with a highlighter
- Have help coordination assignments in a book or planner
- Receive study skills instruction

Assignment modifications:

- Complete fewer or different homework problems than peers
- Write shorter papers
- Answer fewer or different test questions
- Create alternate projects or assignments

Curriculum modifications:

- Learn different material (such as continuing to work on multiplication while classmates move on to fractions, or moving ahead to an extension concept/skill while classmates continue to work on a core skill)

Geometry		Strand: Draw and identify lines and angles, and classify shapes by properties of their lines and angles.
New Jersey Student Learning Standards:		
<p>4.G.1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p> <p>4.G.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.</p> <p>4.G.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.</p>		
Big Ideas:		
<ul style="list-style-type: none"> Understand and apply concepts involving lines and angles of two-dimensional figures. Use properties of standard two-dimensional shapes to identify, classify, and describe them. Use shapes and drawings to find lines of symmetry. 		
Essential Questions:	Enduring Understandings:	
<ul style="list-style-type: none"> How do we draw and identify characteristics of two-dimensional figures? How do we classify two-dimensional shapes? How do you know if a shape is symmetrical? How do you measure and classify angles? How do you find an unknown angle? What is the difference between a point, ray, line, line segment? How are points, lines, line segments, rays, and angles related? 	<ul style="list-style-type: none"> Objects can be described and compared using their geometric attributes. Points and lines are the foundation of geometric shapes. 	
Knowledge, Skills, and Instructional Objectives:		
<ul style="list-style-type: none"> Identify, describe, and classify lines, line segments, and rays. Identify, describe, draw, and classify angles. Identify, describe, and classify triangles. Use illustrations and diagrams to solve problems. Identify, describe, and draw symmetrical objects. 		
Instructional Materials/Resources:	Suggested Vocabulary	
<ul style="list-style-type: none"> McGraw-Hill Mathematics <ul style="list-style-type: none"> 4.G.1. - Ch 10 4.G.2. - Ch 10 4.G.3. - Ch 10 Chapter File folder Daily Worksheets Measuring Up – NJ ASK workbook Teacher created materials 	angle (right, acute, obtuse), line of symmetry, line segment, line, parallel lines, perpendicular lines, plane figure, point, ray, right triangle, two-dimensional figure, vertex	
	Technology:	
	<ul style="list-style-type: none"> Study Island iPads Safari Montage Math websites ActivBoard/Promethean Planet Document camera 8.1.2.A.4; 8.1.P.C.1	
Recommended Instructional Activities:		
<ul style="list-style-type: none"> Problem of the Day/Warm Up activity Textbook activities – direct instruction, cooperative group activities, partner share, games, white boards practice and reteach worksheets – independent practice Activboard activities (Promethean Planet) 		

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- Video clips (Safari Montage)

Extension Strategies/Activities:

Enrichment worksheets, students creating own problems to extend lesson

Cross-curricular Connections/Standards:

Connections are made throughout other subject areas.

RI.4.4.; RI.4.7; NJLSA.W2; W.4.2

21st Century Skills

CRP1; CRP3; CRP6; CRP11; CRP12

Suggested Assessments:

- Problem on the Day/Warm Up Activities
- Chapter File folder Daily Worksheets
- Check Your Progress A & B / Teacher made quizzes
- Daily homework
- Chapter Study Guide
- Chapter Test / Teacher made tests
- Teacher observation

Modifications for SpEd/ELL/Students at Risk/Gifted

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- Use a word processor to type notes or give responses in class
- Use a calculator or table of "math facts"
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Setting accommodations:

- Work or take a test in a different setting, such as a quiet room with few distractions
- Sit where he learns best (for example, near the teacher, away from distractions)
- Use special lighting or acoustics
- Take a test in a small group setting
- Use sensory tools such as an exercise band that can be looped around a chair's legs (so fidgety kids can kick it and quietly get their energy out)

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Grade: 4th Grade Content Area: Mathematics

- Use noise buffers such as headphones, earphones, or earplugs

Timing accommodations:

- Take more time to complete a task or a test
- Have extra time to process oral information and directions
- Take frequent breaks, such as after completing task

Scheduling accommodations:

- Take more time to complete a project
- Take a test in several timed sessions or over several days
- Take sections of a test in a different order
- Take a test at a specific time of day

Organization skills accommodations:

- Use an alarm to help with time management
- Mark texts with a highlighter
- Have help coordination assignments in a book or planner
- Receive study skills instruction

Assignment modifications:

- Complete fewer or different homework problems than peers
- Write shorter papers
- Answer fewer or different test questions
- Create alternate projects or assignments

Curriculum modifications:

- Learn different material (such as continuing to work on multiplication while classmates move on to fractions, or moving ahead to an extension concept/skill while classmates continue to work on a core skill)