Mathematics
Grade 4

CURRICULUM GUIDE
Approved

August 22, 2017

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This curriculum may be modified through varying techniques, strategies and materials, as per an individual student's Individualized Education Plan (IEP).

Approved by the Insert district Board of Education
At the regular meeting held on August 22, 2017
And
Aligned with the New Jersey Student Learning Standards

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Philosophy and Rationale

In the life of the average 4th grader, they have to use multiple mathematical practices daily. It is important for all students to learn to identify and manipulate numbers, understand basic operations, manipulate data and information, and build critical thinking and problem solving skills. These practices enable learners to identify, understand, and solve real world problems using abstract and quantitative reasoning, existing structures and appropriate tools. Learning to use mathematical practices in various situations, gives students a strong range of skills and experiences for success in the 21st Century.

Scope and Sequence

Unit 1: Place Value and Operations with Whole Numbers : 76 Days

●   Generalize understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place.
● Apply understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers.
● Depending on the numbers and the context, select and accurately apply appropriate methods to estimate or mentally calculate products.
● Develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems.
● Apply understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends.
● Select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.

Unit 2: Fractions and Decimals:58 Days

● Students develop understanding of fraction equivalence and operations with fractions.
● Recognize that two different fractions can be equal (e.g., 15/9 = 5/3), and develop methods for generating and recognizing equivalent fractions.
● Extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.

Unit 3: Geometry, Measurement and Data Chap:32 Days

● Describe, analyze, compare, and classify two-dimensional shapes.
● Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

Mission Statement

The Great Meadows Regional School District will provide quality educational opportunities that ensure the individual success of all students within a safe and supportive environment and to build lifelong learners who will meet society's challenges into an beyond the 21st century. To that end, it is anticipated that all students will achieve the New Jersey Student Learning Standards at all grade levels.

Stage 1: Desired Results
Unit 1-Topic- Place Value, Addition, and Subtraction to One Million
Content 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 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.

Essential Questions- How can you use place value to compare, add, subtract, and estimate with whole numbers?

Enduring Understandings
- Students will apply and extend their understandings of addition and subtraction of whole numbers to addition and subtraction of decimals.
- Students' place value understanding will expand to include tenths, hundredths, and thousandths places.
- Students will learn to round decimals, as well as estimate answers to problems involving operations with decimals.

Knowledge and Skills (SWBAT embedded course proficiencies)

- Model the 10-to-1 relationship among positions in the base-ten number system.
- Read and write whole numbers in standard form, word form, and expanded form.
- Compare and order whole numbers based on the values of the digits in each number.
- Rename whole numbers by regrouping.
- Add whole numbers and determine whether solutions to addition problems are reasonable.
- Subtract whole numbers and determine whether solutions to subtraction problems are reasonable.
- Use the strategy draw a diagram to solve comparison problems with addition and subtraction.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- Baseline (Sept.)
- Benchmark 1 (Nov)

Assessment Methods
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan

Solid routines within the math program are essential for students learning. Our math program provides many ways to teach and practice the ideas and topics which can be effective in creating an environment that grows students' knowledge of topics and challenges students to connect math within real world situations. Differentiation will be provided as students complete tasks in a variety of ways, such as small group, partner work, written, visual, auditory, and kinesthetic learning styles. Using a variety of centers, differentiated tasks, and Go Math! tiered resources, will allow students to gain understanding to meet their individual needs. The flexibility of the program allows the teacher to adapt to lessons and routines that work best for their classroom. Some of the items teacher may be using will be:

- Houghton-Mifflin Go Math!

- Reteach/Enrich from Think Central

- Grab-and-Go Centers

- Teacher made/acquired worksheets and activities

- Smart Notebook Lessons

- Math Videos on Think Central, EdPuzzle and other approved sites

- Online Math Games on Think Central or other approved sites

- Interactive Lessons on Think Central

- Small Group Instruction

- Self-Guided Instruction

- Peer to Peer teaching

- Google Classroom

- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practices 2, 4, and 5. MP2 states that students will reason abstractly and quantitatively, MP4 is to model with mathematics, MP 6 states that students will attend to precision.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
15 days
Resources:
Print Resources:
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Hopscotch Facts, Race to One, Round Up!, What's my Place?

Digital Resources:
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results
Unit 1-Topic: Multiply by 1-Digit Numbers
Content Standards
Operations & Algebraic Thinking
CC.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.
CC.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.
CC.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
Number and Operations Base Ten

<u>CC.4.NBT.1:</u> 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.*
<u>CC.4.NBT.3:</u> Use place value understanding to round multi-digit whole numbers to any place.
<u>CC.4.NBT.5:</u> 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.

<u>Essential Questions</u> What strategies can you use to multiply by 1-digit numbers?
<u>Enduring Understandings</u>
- A quantity can be represented numerically in various ways. Sometimes one representation may be more useful than another.
- Effective problem-solving requires knowledge of a variety of strategies and algorithms and when to use them.
- Estimation skills help develop mental flexibility, good number sense, and problem-solving skills.

<u>Knowledge and Skills</u> (SWBAT embedded course proficiencies)
- Relate multiplication equations and comparison statements.
- Solve problems involving multiplicative comparison and additive comparison.
- Multiply tens, hundreds, and thousands by whole numbers through 10.
- Estimate products by rounding and determine if exact answers to multiplication problems are reasonable.
- Use the Distributive Property to multiply a 2-digit number by a 1-digit number.
- Use expanded form to multiply a multidigit number by a 1-digit number.
- Use place value and partial products to multiply a multidigit number by a 1-digit number.
- Use mental math and properties to multiply a multidigit number by a 1-digit number.
- Use the draw a diagram strategy to solve multistep problems.
- Use regrouping to multiply a 2-digit number by a 1-digit number.
- Use regrouping to multiply a multidigit number by a 1-digit number.
- Represent and solve multi-step problems using equations

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
<u>Benchmarks</u> (embedded student proficiencies)
- Benchmark 1 (Nov)
<u>Assessment Methods</u> (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills

● Teacher Observation
● Group & Cooperative Work

Stage 3: Learning Plan
Solid routines within the math program are essential for students learning. Our math program provides many ways to teach and practice the ideas and topics which can be effective in creating an environment that grows students' knowledge of topics and challenges students to connect math within real world situations. Differentiation will be provided as students complete tasks in a variety of ways, such as small group, partner work, written, visual, auditory, and kinesthetic learning styles. Using a variety of centers, differentiated tasks, and Go Math! tiered resources, will allow students to gain understanding to meet their individual needs. The flexibility of the program allows the teacher to adapt to lessons and routines that work best for their classroom. Some of the items teacher may be using will be:

● Houghton-Mifflin Go Math!

● Reteach/Enrich from Think Central

● Grab-and-Go Centers

● Teacher made/acquired worksheets and activities

● Smart Notebook Lessons

● Math Videos on Think Central, EdPuzzle and other approved sites

● Online Math Games on Think Central or other approved sites

● Interactive Lessons on Think Central

● Small Group Instruction

● Self-Guided Instruction

● Peer to Peer teaching

● Google Classroom

● IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 1,2, 4, and 6. MP1 states that students will make sense of problems and persevere in solving them, MP2 states that students will reason abstractly and quantitatively, MP4 is to model with mathematics, and MP 6 is to attend to precision.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media

Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
19 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Flowering Factors, Know Your Nines, What's My Fact?, Product Power, Multiplication Marathon.

Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results
Unit 1-Topic: Multiply 2-Digit Numbers
Content Standards
Operations & Algebraic Thinking
CC.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.
Number and Operations Base Ten
CC.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. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division*.
CC.4.NBT.3: Use place value understanding to round multi-digit whole numbers to any place.
CC.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.

Essential Questions What strategies can you use to multiply 2-digit numbers?
Enduring Understandings

- A quantity can be represented numerically in various ways. Sometimes one representation may be more useful than another.
- Effective problem-solving requires knowledge of a variety of strategies and algorithms and when to use them.
- Estimation skills help develop mental flexibility, good number sense, and problem-solving skills.

Knowledge and Skills (SWBAT embedded course proficiencies)
- Use place value and multiplication properties to multiply by tens.
- Estimate products by rounding or by using compatible numbers.
- Use area models and partial products to multiply 2-digit numbers.
- Use place value and partial products to multiply 2-digit numbers.
- Use regrouping to multiply 2-digit numbers.
- Choose a method to multiply 2-digit numbers.
- Use the strategy draw a diagram to solve multi-step multiplication problems.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- Benchmark 1 (Nov)

Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan
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- Interactive Lessons on Think Central
- Small Group Instruction
- Self-Guided Instruction
- Peer to Peer teaching
- Google Classroom
- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 1, 2, 4, 5, and 8.. MP1 states that students will make sense of problems and persevere in solving them, MP2 is to reason abstractly and quantitatively, MP4 is to model with mathematics, MP 5 states that students will use appropriate tools strategically, and MP8 is to look for and express regularity in repeated reasoning.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
14 Days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Flowering Factors, Know Your Nines, What's My Fact?, Product Power, Multiplication Marathon.
Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos

- IXL

Stage 1: Desired Results
Unit 1-Topic: Divide by 1-Digit Numbers
Content Standards
Operations & Algebraic Thinking
CC.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.
Number and Operations Base Ten
CC.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.
CC.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. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division*.

Essential Questions How can you divide by 1-digit numbers?
Enduring Understandings
- A quantity can be represented numerically in various ways. Sometimes one representation may be more useful than another.
- Multiplication and division are related.
- Effective problem-solving requires knowledge of a variety of strategies and algorithms and when to use them.
- Estimation skills help develop mental flexibility, good number sense, and problem-solving skills

Knowledge and Skills (SWBAT embedded course proficiencies)
- Use multiples to estimate quotients.
- Use models to divide whole numbers that do not divide evenly.
- Use remainders to solve division problems.
- Divide tens, hundreds, and thousands by whole numbers through 10.
- Use compatible numbers to estimate quotients.
- Use the Distributive Property to find quotients.
- Use repeated subtraction and multiples to find quotients.
- Use partial quotients to divide.
- Use base-ten blocks to model division with regrouping.
- Use place value to determine where to place the first digit of a quotient.
- Divide multi-digit numbers by 1-digit divisors.
- Solve problems by using the strategy draw a diagram.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

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- Online Math Games on Think Central or other approved sites

- Interactive Lessons on Think Central

- Small Group Instruction

- Self-Guided Instruction

- Peer to Peer teaching

- Google Classroom

- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 1, 2, 4, 5, and 8.. MP1 states that students will make sense of problems and persevere in solving them, MP2 is to reason abstractly and quantitatively, MP4 is to model with mathematics, MP 5 states that students will use appropriate tools strategically, and MP8 is to look for and express regularity in repeated reasoning.

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Time Allotment
19 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Divide All Five, Divide to Win, Divided Rolls!, Divide and Conquer.
Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results
Unit 1-Topic: Factors, Multiples, and Patterns
Content Standards
Operations & Algebraic Thinking
CC.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.
CC.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. *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.

Essential Questions How can you find factors and multiples, and how can you generate and describe number patterns?

Enduring Understandings
- A quantity can be represented numerically in various ways. Sometimes one representation may be more useful than another.
- Multiplication and division are related.
- Effective problem-solving requires knowledge of a variety of strategies and algorithms and when to use them.
- Estimation skills help develop mental flexibility, good number sense, and problem-solving skills

Knowledge and Skills (SWBAT embedded course proficiencies)
- Find all the factors of a number by using models.
- Determine whether a number is a factor of a given number.
- Solve problems by using the strategy make a list.
- Understand the relationship between factors and multiples, and determine whether a number is a multiple of a given number.
- Determine whether a number is prime or composite.
- Generate a number pattern and describe features of the pattern.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations

Benchmarks (embedded student proficiencies)
- Benchmark 2 (March)

Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan

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understanding to meet their individual needs. The flexibility of the program allows the teacher to adapt to lessons and routines that work best for their classroom. Some of the items teacher may be using will be:

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- Grab-and-Go Centers
- Teacher made/acquired worksheets and activities
- Smart Notebook Lessons
- Math Videos on Think Central, EdPuzzle and other approved sites
- Online Math Games on Think Central or other approved sites
- Interactive Lessons on Think Central
- Small Group Instruction
- Self-Guided Instruction
- Peer to Peer teaching
- Google Classroom
- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 3, 4, 6, 7, and 8. MP3 states that students will construct viable arguments and critique the reasoning of others, MP4 is to model with mathematics, MP 6 states that students will attend to precision, MP7 is to look for and make use of structure, and MP8 states that students will look for and express regularity in repeated reasoning.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
9 days
Resources
Print Resources:

● Go Math Reteach Worksheets
● Go Math Enrich Worksheets
● Grab and Go Centers Kits: What's my Place?, What's my Fact?, What's my Rule?, Triangle Products, Factor Farm.

Digital Resources**:**
● Interactive Student Edition
● Math on the Spot Videos
● Personal Math Trainer
● Mega Math Games
● Animated Math Videos
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Stage 1: Desired Results

Unit 2-Topic: Fraction Equivalence and Comparison

Content Standards

Number and Operations- Fractions

CC.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.

CC.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.

Essential Questions What strategies can you use to compare fractions and write equivalent fractions?

Enduring Understandings
● Different types of numbers, such as fractions and decimals, are related to each other and can be used to describe particular situations in daily life.
● Fractions are parts of a whole, a subset of a set, or a location on a number line.
● Fractions are rational numbers that are needed in everyday life to solve problems.
● Experiments can be used to test and confirm the expected probability of an outcome.

Knowledge and Skills (SWBAT embedded course proficiencies)
● Use models to show equivalent fractions.
● Use multiplication to generate equivalent fractions.
● Write and identify equivalent fractions in simplest form.
● Use equivalent fractions to represent a pair of fractions as fractions with a common denominator.
● Use the strategy make a table to solve problems using equivalent fractions.

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- Compare fractions using benchmarks.
- Compare fractions by first writing them as fractions with a common numerator or a common denominator.
- Compare and order fractions.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- Benchmark 2 (March)

Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
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- Group & Cooperative Work

Stage 3: Learning Plan
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- IXL

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This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
15 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Fraction Action, Fraction Concentration, Fraction Bingo!, Fantastic Fractions, Flowering Factors.
Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results
Unit 2-Topic: Add and Subtract Fractions
Content Standards
Number and Operations-Fractions
CC.4.NF.3: Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.
3.A: Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

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. *Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.*

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.

3.D: 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.

Essential Questions How do you add or subtract fractions that have the same denominator?

Enduring Understandings
- Fractions are parts of a whole, a subset of a set, or a location on a number line.
- Fractions are rational numbers that are needed in everyday life to solve problems.
- Experiments can be used to test and confirm the expected probability of an outcome

Knowledge and Skills (SWBAT embedded course proficiencies)
- Understand that to add and subtract fractions they must refer to parts of the same whole.
- Decompose a fraction by writing it as a sum of fractions with the same denominators.
- Use models to represent and find sums involving fractions.
- Use models to represent and find differences involving fractions.
- Solve word problems involving addition and subtraction with fractions.
- Write fractions greater than 1 as mixed numbers and write mixed numbers as fractions greater than 1.
- Add and subtract mixed numbers.
- Rename mixed numbers to subtract.
- Use the properties of addition to add fractions.
- Use the strategy act it out to solve multi-step fraction problems

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- Benchmark 2 (March)

Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan

Solid routines within the math program are essential for students learning. Our math program provides many ways to teach and practice the ideas and topics which can be effective in creating an environment that grows students' knowledge of topics and challenges students to connect math within real world situations. Differentiation will be provided as students complete tasks in a variety of ways, such as small group, partner work, written, visual, auditory, and kinesthetic learning styles. Using a variety of centers, differentiated tasks, and Go Math! tiered resources, will allow students to gain understanding to meet their individual needs. The flexibility of the program allows the teacher to adapt to lessons and routines that work best for their classroom. Some of the items teacher may be using will be:

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- Math Videos on Think Central, EdPuzzle and other approved sites
- Online Math Games on Think Central or other approved sites
- Interactive Lessons on Think Central
- Small Group Instruction
- Self-Guided Instruction
- Peer to Peer teaching
- Google Classroom
- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 1, 2, 3, 6 and 8. MP1 states that students will make sense of problems and persevere in solving them, MP2 states that students will reason abstractly and quantitatively, MP3 states that students will construct viable arguments and critique the reasoning of others, MP6 states that students will attend to precision, and MP8 states that students will look for and express regularity in repeated reasoning.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and

monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
17 days
Resources
<u>Print Resources</u>**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Fraction Action, Fraction Concentration, Fraction Bingo!, Fantastic Fractions, Flowering Factors.

<u>Digital Resources</u>**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
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- IXL

Stage 1: Desired Results
Unit 2-Topic: Multiply Fractions by Whole Numbers
Content Standards
<u>Number and Operations Fractions</u>
<u>CC.4.NF.4:</u> Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
<u>4.A:</u> 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).*
<u>4.B:</u> 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.*
<u>4.C:</u> 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?*

<u>Essential Questions</u> How do you multiply fractions by whole numbers?
<u>Enduring Understandings</u>

- A quantity can be represented numerically in various ways. Sometimes one representation may be more useful than another.
- Effective problem-solving requires knowledge of a variety of strategies and algorithms and when to use them.
- Estimation skills help develop mental flexibility, good number sense, and problem-solving skills.
- Fractions are parts of a whole, a subset of a set, or a location on a number line.
- Fractions are rational numbers that are needed in everyday life to solve problems.
- Experiments can be used to test and confirm the expected probability of an outcome.

Knowledge and Skills (SWBAT embedded course proficiencies)

- Write a fraction as a product of a whole number and a unit fraction.
- Write a product of a whole number and a fraction as a product of a whole number and a unit fraction.
- Use a model to multiply a fraction by a whole number.
- Multiply a fraction by a whole number to solve a problem.
- Use the strategy draw a diagram to solve comparison problems with fractions.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- Benchmark 2 (March)
Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan
Solid routines within the math program are essential for students learning. Our math program provides many ways to teach and practice the ideas and topics which can be effective in creating an environment that grows students' knowledge of topics and challenges students to connect math within real world situations. Differentiation will be provided as students complete tasks in a variety of ways, such as small group, partner work, written, visual, auditory, and kinesthetic learning styles. Using a variety of centers, differentiated tasks, and Go Math! tiered resources, will allow students to gain understanding to meet their individual needs. The flexibility of the program allows the teacher to adapt to lessons and routines that work best for their classroom. Some of the items teacher may be using will be:

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- Math Videos on Think Central, EdPuzzle and other approved sites
- Online Math Games on Think Central or other approved sites
- Interactive Lessons on Think Central
- Small Group Instruction
- Self-Guided Instruction
- Peer to Peer teaching
- Google Classroom
- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 1, 2, 3, 6 and 8. MP1 states that students will make sense of problems and persevere in solving them, MP2 states that students will reason abstractly and quantitatively, MP 3 states that students will construct viable arguments and critique the reasoning of others, MP 6 states that students will attend to precision, and MP8 states that students will look for and express regularity in repeated reasoning.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
12 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets

- Grab and Go Centers Kits: Fraction Action, Fraction Concentration, Fraction Bingo!, Fantastic Fractions, Flowering Factors.

<u>Digital Resources</u>**:**

- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results

Unit 2-Topic: Relate Fractions and Decimals

Content Standards

<u>Number and Operations- Fractions</u>

<u>CC.4.NF.5</u> :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*For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.*

<u>CC.4.NF.6</u>: 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.*

<u>CC.4.NF.7</u>: 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.

<u>Measurement and Data</u>

<u>CC.4.MD.2:</u> 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.

<u>Essential Questions</u> How can you record decimal notation for fractions, and compare decimal fractions?

<u>Enduring Understandings</u>

- Number sense consists of being aware of many possibilities for representing a given number and being able to use the representations with flexibility.
- The results of a statistical investigation can be used to support or refute an argument.
- Calculators can enhance understanding of mathematical concepts.
- Fractions, decimals, and percentages can be used as interchangeable expressions; the specific use depends on the situation.

Knowledge and Skills (SWBAT embedded course proficiencies)
- Record tenths as fractions and as decimals.
- Round hundredths as fractions and as decimals.
- Record tenths and hundredths as fractions and decimals.
- Translate among representations of fractions, decimals, and money.
- Solve problems by using the strategy act it out.
- Add fractions when the denominators are 10 or 100.
- Compare decimals to hundredths by reasoning about their size.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- Benchmark 2 (March)

Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan
Solid routines within the math program are essential for students learning. Our math program provides many ways to teach and practice the ideas and topics which can be effective in creating an environment that grows students' knowledge of topics and challenges students to connect math within real world situations. Differentiation will be provided as students complete tasks in a variety of ways, such as small group, partner work, written, visual, auditory, and kinesthetic learning styles. Using a variety of centers, differentiated tasks, and Go Math! tiered resources, will allow students to gain understanding to meet their individual needs. The flexibility of the program allows the teacher to adapt to lessons and routines that work best for their classroom. Some of the items teacher may be using will be:

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- Small Group Instruction
- Self-Guided Instruction
- Peer to Peer teaching
- Google Classroom
- IXL

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This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
 14 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Fraction Action, Fraction Concentration, Fraction Bingo!, Fantastic Fractions, Flowering Factors, Batting Decimals, Decimal Train.
Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results
Unit 3-Topic: Two-Dimensional Figures
Content Standards
Operations & Algebraic Thinking
CC.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. *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*
Geometry
CC.4.G.1: Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
CC.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.
CC.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.

Essential Questions How can you draw and identify lines and angles, and how can you classify shapes?
Enduring Understandings
- Understanding area and perimeter can help solve real-world problems.
- Formulas provide a more efficient means of solving mathematical problems.
- Measurements can be used to describe, compare, and make sense of objects in our world.
- Symmetrical figures have certain properties.
- Geometric figures can be transformed in a variety of ways.

Knowledge and Skills (SWBAT embedded course proficiencies)
- Identify and draw points, lines, line segments, rays, and angles.
- Classify triangles by the size of their angles.
- Identify and draw parallel lines and perpendicular lines.
- Determine whether a figure has a line of symmetry.
- Identify and draw lines of symmetry in two-dimensional figures.
- Use the strategy act it out to solve pattern problems.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- End of Year Benchmark (June)

<u>Assessment Methods</u> (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan

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- Smart Notebook Lessons

- Math Videos on Think Central, EdPuzzle and other approved sites

- Online Math Games on Think Central or other approved sites

- Interactive Lessons on Think Central

- Small Group Instruction

- Self-Guided Instruction

- Peer to Peer teaching

- Google Classroom

- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 3, 5, 6, and 7. MP3 states that students construct viable arguments and critique the reasoning of others, MP4 is to

model with mathematics, MP 5 states that students will use appropriate tools strategically, and MP7 is to look for and make use of structure.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
10 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: What's the Difference?, Picture Perfect, Congruent Match, Spinning Rectangles.

Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results
Unit 3-Topic: Angle
Content Standards
Measurement and Data
CC.4.MD.6: Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
CC.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.

Essential Questions How can you measure angles and solve problems involving angle measures?
Enduring Understandings

- Estimation skills help develop mental flexibility, good number sense, and problem-solving skills.
- Measurement is an essential skill used in everyday life.
- Effective problem-solving requires knowledge of a variety of strategies and algorithms and when to use them.

Knowledge and Skills (SWBAT embedded course proficiencies)
- Relate angles and fractional parts of a circle.
- Relate degrees to fractional parts of a circle by understanding that an angle that measures one degree turns through n / 360 of a circle.
- Use a protractor to measure an angle and to draw an angle with a given measure.
- Determine the measure of an angle separated into parts.
- Use the strategy draw a diagram to solve angle measurement problems.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- End of Year Benchmark (June)
Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan
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- Interactive Lessons on Think Central
- Small Group Instruction
- Self-Guided Instruction
- Peer to Peer teaching
- Google Classroom
- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 3, 4, and 5. MP3 states that students will construct viable arguments and critique the reasoning of others, MP4 is to model with mathematics, and MP 5 states that students will use appropriate tools strategically.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
 8 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Connecting Vertices, Roll to Measure, Build the View
.
Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos

- IXL

Stage 1: Desired Results
Unit 3-Topic: Relative Sizes of Measurement Units
Content Standards
Measurement and Data
CC.4.MD.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. *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).*
CC.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.
CC.4.MD.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 by using 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.*

Essential Questions How can you use relative sizes of measurements to solve problems and to generate measurement tables that show a relationship?
Enduring Understandings
- Geometric properties can be extended to 3-dimensional shapes.
- There are certain units that are the best choice for measuring in certain situations.
- Everyday objects have a variety of attributes, each of which can be measured in many ways.
- There are appropriate tools and units for measuring different objects and distances.

Knowledge and Skills (SWBAT embedded course proficiencies)

- Use the strategy draw a diagram to solve elapsed time problems.
- Solve problems involving mixed measures.
- Use patterns to write number pairs for measurement units.
- Use benchmarks to understand the relative sizes of measurement units.
- Use models to compare customary units of length, weight, and volume.
- Make and interpret line plots with fractional data.

- Use models to compare metric units of length.
- Use models to compare metric units of mass and liquid volume.
- Use models to compare units of time.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
Benchmarks (embedded student proficiencies)
- End of Year Benchmark (June)

Assessment Methods (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
- Teacher Observation
- Group & Cooperative Work

Stage 3: Learning Plan
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- Online Math Games on Think Central or other approved sites

- Interactive Lessons on Think Central

- Small Group Instruction

- Self-Guided Instruction

- Peer to Peer teaching

- Google Classroom
- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 2, 4, 5, and 6. MP2 states that students will reason abstractly and quantitatively, MP4 is to model with mathematics, MP 5 states that students will use appropriate tools strategically, and MP6 states that students will attend to precision.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
14 days
Resources
Print Resources**:**
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- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Capacity Challenge, Ultimate Units, Balancing Act, Moon Weight.
Digital Resources**:**
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- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games
- Animated Math Videos
- IXL

Stage 1: Desired Results
Unit 3-Topic: Algebra: Perimeter and Area
Content Standards
Measurement and Data
CC.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.*

<u>Essential Questions</u> How can you use formulas for perimeter and area to solve problems?
<u>Enduring Understandings</u>
- Geometric properties can be used to construct geometric figures.
- Spatial sense and geometric relationships are a means to solve problems and make sense of the world around us.

<u>Knowledge and Skills</u> (SWBAT embedded course proficiencies)
- Use a formula to find the perimeter of a rectangle.
- Use a formula to find the area of a rectangle.
- Find the area of combined rectangles.
- Given perimeter or area, find the unknown measure of a side of a rectangle.
- Use the strategy solve a simpler problem to solve area problems.

Stage 2: Evidence of Understanding, Learning Objectives and Expectations
<u>Benchmarks</u> (embedded student proficiencies)
- End of Year Benchmark (June)

<u>Assessment Methods</u> (formative, summative, other evidence and/or student self-assessment)
- Lesson Quick Checks
- Formative Assessment
- Class-Work Review
- Open-Ended Problems
- Timed Drills
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Stage 3: Learning Plan
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- Smart Notebook Lessons
- Math Videos on Think Central, EdPuzzle and other approved sites
- Online Math Games on Think Central or other approved sites
- Interactive Lessons on Think Central
- Small Group Instruction
- Self-Guided Instruction
- Peer to Peer teaching
- Google Classroom
- IXL

In this unit, students will engage in 21st Century skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation. They will complete this by following mathematical practice 1, 4, 5, and 7. MP1 states that students will make sense of problems and persevere in solving them, MP4 is to model with mathematics, MP 5 states that students will use appropriate tools strategically, and MP7 is to look for and make use of structure.

This unit will also focus on many Life and Career Skills by supporting students' interactions with peers and teachers through whole group, small group, technological resource, and partner activities. Students will use several online computer resources provided by Go Math!, supplemental games and activities that can be tracked and monitored. These activities help strengthen students skills in Information Literacy, Media Literacy, and Informational Communications Technologies (ICT) Literacy. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media, and technology.

Time Allotment
8 days
Resources
Print Resources**:**
- Go Math Reteach Worksheets
- Go Math Enrich Worksheets
- Grab and Go Centers Kits: Tile Tabulations, Trail Travels, 36 is my Area, Roomy Dimensions.
Digital Resources**:**
- Interactive Student Edition
- Math on the Spot Videos
- Personal Math Trainer
- Mega Math Games

- Animated Math Videos
- IXL

New Jersey Student Learning Standards

http://www.state.nj.us/education/cccs/

Integration of 21st Century Theme(s)
The following websites are sources for the following 21st Century Themes and Skills:
http://www.nj.gov/education/code/current/title6a/chap8.pdf
http://www.p21.org/about-us/p21-framework .
http://www.state.nj.us/education/cccs/standards/9/index.html

21st Century Interdisciplinary Themes (into core subjects)
• Global Awareness
• Financial, Economic, Business and Entrepreneurial Literacy
• Civic Literacy
• Health Literacy
• Environmental Literacy

Learning and Innovation Skills
• Creativity and Innovation
• Critical Thinking and Problem Solving
• Communication and Collaboration

Information, Media and Technology Skills
• Information Literacy
• Media Literacy
• ICT (Information, Communications and Technology) Literacy

Life and Career Skills
• Flexibility and Adaptability
• Initiative and Self-Direction
• Social and Cross-Cultural Skills
• Productivity and Accountability
• Leadership and Responsibility
Integration of Digital Tools
- **Classroom computers/laptops**

- **Technology Lab**
- **FM system**
- **Other software programs**