MATH UNIT 1 –Generate & Analyze Patterns/Meanings of Multiplication and Division

3-4 week unit

Unit Summary

In this unit students will:

- Interpret a multiplication equation as a comparison (35=5x7, where 35 is 5 times as many as 7)
- Generate a number pattern
- Generate a shape pattern
- 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 number is prime or composite
- Understand how factors and multiples relate to multiplication and division
- Determine how the properties of multiplication can help to find the answer to a multiplication problem
- Solve multi-step word problems

Title of Unit	**Subject Area**
Unit 1 – Generate & Analyze Patterns/Meanings of Multiplication and Division	4th Grade Math

STANDARDS FOR MATHEMATICAL CONTENT

Use the four operations with whole numbers to solve problems.
MCC4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

MCC4.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.

MCC4.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.

Gain familiarity with factors and multiples.
MCC4.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.

Generate and analyze patterns.
MCC4.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.

STANDARDS FOR MATHEMATICAL PRACTICE

This section provides examples of learning experiences for this unit that support the development of the proficiencies described in the Standards for Mathematical Practice. These proficiencies correspond to those developed through the Literacy Standards. The statements provided offer a few examples of connections between the Standards for Mathematical Practice and the Content Standards of this unit. This list is not exhaustive and will hopefully prompt further reflection and discussion.

1. Make sense of problems and persevere in solving them.

2. Reason abstractly and quantitatively.

3. Construct viable arguments and critique the reasoning of others.

4. Model with mathematics.

5. Use appropriate tools strategically.

6. Attend to precision.

7. Look for and make use of structure.

8. Look for and express regularity in repeated reasoning.

"I Can" Statements:

- ✓ I can identify and extend repeating patterns.
- ✓ I can extend tables of ordered pairs for situations involving addition, subtraction, multiplication, and division.
- ✓ I can find the rule to extend an input/output table.
- ✓ I can extend patterns of cubes or tiles.
- ✓ I can use reasoning to solve real-life problems.
- ✓ I can recognize multiplication as repeated addition.
- ✓ I can use patterns to find products with factors of 2, 5, and 9.
- ✓ I can use multiplication properties to simplify computations.
- ✓ I can use the distributive property to find products of the factors of 3, 4, 6, 7, and 8 by breaking apart problems into simpler problems.
- ✓ I can recognize patterns and am able to continue the pattern.
- ✓ I can use and draw models to solve division problems.
- ✓ I can use arrays to write and complete multiplication and division fact families.
- ✓ I can relate known multiplication facts to division to solve unknown division facts.

ESSENTIAL QUESTIONS

Choose a few questions based on the needs of your students.

- How can patterns be used to describe how two quantities are related?
- How can a relationship between two quantities be shown using a table?
- How can patterns and properties be used to find some multiplication facts?
- How can unknown multiplication facts be found by breaking them into known facts?
- How can unknown division facts be found by thinking about a related multiplication fact?

Prerequisite Vocabulary: Product Repeated Addition Fact Family Repeating Pattern **New Vocabulary:** Commutative Property of Multiplication Zero Property of Multiplication Identity Property of Multiplication Distributive Property Factor Multiple Inverse Operations Quotient Input/Output tables	Notes
Formative Assessments Exit Slips….show what you know Observation Individual white boards 4 Corners: Strongly agree Agree Disagree Strongly disagree Think, Pair, and Share Math Journal Thumbs up, Thumbs in the Middle, Thumbs Down	**Summative** Unit 1 Assessment 4 Week Progress Report

MATH UNIT 2 –Place Value, Number Sense, Rounding, and Adding & Subtracting Multi-digit Numbers
5-6 week unit
Unit Summary
In this unit students will:

- Read numbers correctly through the millions
- Write numbers correctly through millions in standard form
- Write numbers correctly through millions in expanded form
- Identify the place value name for multi-digit whole numbers
- Identify the place value locations for multi-digit whole numbers
- Round multi-digit whole numbers to any place
- Solve multi-step problems using the four operations
- Add and subtract numbers up to one million.

Title of Unit	**Subject Area**
Unit 2 –Place Value, Number Sense, Rounding, and Adding & Subtracting Multi-digit Numbers	4th Grade Math

STANDARDS FOR MATHEMATICAL CONTENT

Use the four operations with whole numbers to solve problems.
MCC4.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**.**

Generalize place value understanding for multi-digit whole numbers.
MCC4.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.

MCC4.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.

MCC4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.

Use place value understanding and properties of operations to perform multi-digit arithmetic.
MCC4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.

STANDARDS FOR MATHEMATICAL PRACTICE

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1. Make sense of problems and persevere in solving them. Students make sense of problems involving place value and rounding in computation.

2. Reason abstractly and quantitatively. Students demonstrate abstract reasoning about relative size of numbers.

3. Construct viable arguments and critique the reasoning of others. Students construct and critique arguments regarding number strategies including addition and subtraction or rounding strategies.

4. Model with mathematics. Students use base ten materials to demonstrate understanding of a multi-digit whole number.

5. Use appropriate tools strategically. Students select and use tools such as place value charts and base ten materials to identify patterns within the base ten system.

6. Attend to precision. Students attend to the language of real-world situations to determine if addition and subtraction answers are reasonable.

7. Look for and make use of structure. Students relate the structure of the base ten system to 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.

8. Look for and express regularity in repeated reasoning. Students relate the structure of the base ten system to explain 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 Can" Statements:

- I can explain the value of each digit in a multi-digit whole number as ten times more than the digit to the right.
- I can read and write a multi-digit number in standard, word, and expanded form up to a millions.
- I can compare two multi-digit numbers up to a million and identify whether they are less than (<), greater than (>) or equal (=) to another number.
- I can round numbers, up to one million, to any given place value.
- I can add and subtract numbers up to a million.

ESSENTIAL QUESTIONS

Choose a few questions based on the needs of your students.

- How does our base-10 number system work?
- How does understanding base-10 number system help us add and subtract?
- How do digit values change as they are moved around in large numbers?
- What determines the value of a digit?
- How does estimation keep us from having to count large numbers individually?
- How are large numbers estimated?
- What conclusions can I make about the places within our base ten number system?
- What happens to a digit when multiplied and divided by 10?
- What effect does the location of a digit have on the value of the digit?
- How can we compare large numbers?
- What determines the value of a number?
- Why is it important for me to be able to compare numbers?
- What is a sensible answer to a real problem?
- What information is needed in order to round whole number to any place?
- How can I ensure my answer is reasonable?
- How can rounding help me compute numbers?
- What effect does a remainder have on my rounded answer?
- What strategies can I use to help me make sense of a written algorithm?

Prerequisite Vocabulary: Comparisons Equal to Greater than Less than Place Value Digits Number Symbols Area model Place Value Rectangular Array Multiply **New Vocabulary:** Base-ten numerals Millions Place Expanded Form Standard Form Word Form Multi-digit whole number	Notes
Formative Assessments Exit Slips….show what you know Observation Individual white boards 4 Corners: Strongly agree Agree Disagree Strongly disagree Think, Pair, and Share Math Journal Thumbs up, Thumbs in the Middle, Thumbs Down	**Summative** Place Value, Number Sense, Rounding, and Adding & Subtracting Multi-digit Numbers Unit 2 Assessment 4 Week Progress Report

MATH UNIT 3 – Multiplication
3-4 week unit
Unit Summary
In this unit students will:

- Solve multi-step problems using the four operations
- Multiply a whole number of up to 4 digits by a one-digit whole number
- Multiply two, two-digit numbers
- Use estimation to solve multiplication problems
- Find factors and multiples
- Identify prime and composite numbers
- Identify odd and even numbers

Title of Unit	**Subject Area**
Unit 3 – Multiplication	4th Grade Math

STANDARDS FOR MATHEMATICAL CONTENT

Use place value understanding and properties of operations to perform multi-digit arithmetic.
MCC4.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.

Use the four operations with whole numbers to solve problems.
MCC4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

MCC4.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.

MCC4.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.

Gain familiarity with factors and multiples.
MCC4.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.

STANDARDS FOR MATHEMATICAL PRACTICE

This section provides examples of learning experiences for this unit that support the development of the proficiencies described in the Standards for Mathematical Practice. These proficiencies correspond to those developed through the Literacy Standards. The statements provided offer a few examples of connections between the Standards for Mathematical Practice and the Content Standards of this unit. This list is not exhaustive and will hopefully prompt further reflection and discussion.

1. Make sense of problems and persevere in solving them. Students make sense of problems involving multiplication and division.

2. Reason abstractly and quantitatively. Students demonstrate abstract reasoning about numbers, identifying which are prime and composite and explaining their identification.

3. Construct viable arguments and critique the reasoning of others. Students construct and critique arguments regarding number strategies including multiplication and division strategies.

4. Model with mathematics. Students use area models and rectangular arrays to model understanding of multiplication and division concepts.

5. Use appropriate tools strategically. Students select and use tools such as hundred charts, rectangular arrays using materials and area models to identify types of numbers, factors and multiples and solve multiplication and division problems.

6. Attend to precision. Students attend to the language of real-world situations to determine if multiplication and division answers are reasonable.

7. Look for and make use of structure. Students relate the structure of an area model or rectangular array to determine the answers to multiplication and division problems.

8. Look for and express regularity in repeated reasoning. Students relate the structure of a hundred chart to identify prime and composite numbers, as well as, factors and multiples of numbers.

"I Can" Statements:

- I can interpret a multiplication equation as a comparison.
- I can write a multiplication equation in several ways.
- I can use different operations to solve word problems involving multiplicative comparison.
- I can determine when to add, subtract, multiply, or divide in word problems.
- I can solve a word problem using different problem solving strategies.
- I can choose the correct operation to perform at each step of a multistep word problem.
- I can interpret remainders in word problems.
- I can write equations using a variable to represent the unknown.
- I can use estimation, rounding, or mental math strategies to check my answer.
- I can define and determine if a number is prime or composite.
- I can define factors and multiples.
- I can list all of the factor pairs for any whole number 1-100
- I can determine multiples of a given whole number from 1-100
- I can find the unknown in simple equations.
- I can multiply a 4 digit by one digit number, and a 2 digit by 2 digit number without a calculator.
- I can use words, drawings, and equations to explain multiplication with arrays and model areas.

ESSENTIAL QUESTIONS

Choose a few questions based on the needs of your students.

- What is factor?
- What does it mean to factor?
- How do I identify prime numbers?
- How do I identify composite numbers?
- What is the difference between a prime and a composite number?
- What are multiples?
- How is skip counting related to identifying multiples?
- What is a product?
- What is the difference between a factor and product?
- How do we know if a number is prime or composite?
- How can we determine whether a number is odd or even?
- How are factors and multiples defined?
- How will diagrams help us determine and show the products of two-digit numbers?
- How can I effectively explain my mathematical thinking and reasoning to others?
- What patterns do I notice when I am multiplying whole numbers that can help me multiply more efficiently?
- What real life situations require the use of multiplication?
- What is a sensible answer to a real problem?
- What information is needed in order to round whole number to any place?
- How can I ensure my answer is reasonable?
- What effect does a remainder have on my rounded answer?
- What are compatible numbers and how do they aid in dividing whole numbers?
- How are multiplication and division related to each other?
- What are some simple methods for solving multiplication and division problems?
- What patterns of multiplication and division can assist us in problem solving?
- How can we find evidence to support our conclusions?
- How can we use clues and reasoning to find an unknown number?
- How can we determine the relationships between numbers?
- How do multiplication, division, and estimation help us solve real world problems?
- How can we organize our work when solving a multi-step word problem?

Prerequisite Vocabulary: Comparison Whole Numbers Word Problems Increasing Repeated Addition Rounding Multiplication Array **New Vocabulary:** Estimation strategies Mental computation Multi-step word problems Multiplication equations Rule Sequence	Notes
Formative Assessments Exit Slips….show what you know Observation Individual white boards 4 Corners: Strongly agree Agree Disagree Strongly disagree Think, Pair, and Share Math Journal Thumbs up, Thumbs in the Middle, Thumbs Down	**Summative Assess.** Multiplication Unit 3 Assessment 4 Week Progress Reports

MATH UNIT 4 – Division
3-4 week unit
Unit Summary

Using strategies based on place value, the properties of operations, and the relationships between multiplication and division, students will learn to find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors using standard algorithm and applying the process to real-life situations. Students will illustrate and explain the calculation by using equations, rectangular arrays, and area models.

In this unit students will:

- Solve multi-step problems using the four operations
- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors
- Use estimation to solve division problems
- Find factors and multiples
- Identify prime and composite numbers
- Check quotients by multiplying up 4-digit numbers by 1-digit numbers.

Title of Unit	**Subject Area**
Unit 4 – Division	4th Grade Math

STANDARDS FOR MATHEMATICAL CONTENT

Use place value understanding and properties of operations to perform multi-digit arithmetic.
MCC4.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.

Use place value understanding and properties of operations to perform multi-digit arithmetic.
MCC4.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.

Use the four operations with whole numbers to solve problems.
MCC4.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.

MCC4.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.

STANDARDS FOR MATHEMATICAL PRACTICE

This section provides examples of learning experiences for this unit that support the development of the proficiencies described in the Standards for Mathematical Practice. These proficiencies correspond to those developed through the Literacy Standards. The statements provided offer a few examples of connections between the Standards for Mathematical Practice and the Content Standards of this unit. This list is not exhaustive and will hopefully prompt further reflection and discussion.

1. Make sense of problems and persevere in solving them. Students make sense of problems involving multiplication and division.

2. Reason abstractly and quantitatively. Students demonstrate abstract reasoning about numbers, identifying which are prime and composite and explaining their identification.

3. Construct viable arguments and critique the reasoning of others. Students construct and critique arguments regarding number strategies including multiplication and division strategies.

4. Model with mathematics. Students use area models and rectangular arrays to model understanding of multiplication and division concepts.

5. Use appropriate tools strategically. Students select and use tools such as hundred charts, rectangular arrays using materials and area models to identify types of numbers, factors and multiples and solve multiplication and division problems.

6. Attend to precision. Students attend to the language of real-world situations to determine if multiplication and division answers are reasonable.

7. Look for and make use of structure. Students relate the structure of an area model or rectangular array to determine the answers to multiplication and division problems.

8. Look for and express regularity in repeated reasoning. Students relate the structure of a hundred chart to identify prime and composite numbers, as well as, factors and multiples of numbers.

"I Can" Statements:

- I can use different operations to solve word problems involving multiplicative comparison.
- I can determine when to add, subtract, multiply, or divide in word problems.
- I can solve a word problem using different problem solving strategies.
- I can choose the correct operation to perform at each step of a multistep word problem.
- I can interpret remainders in word problems.
- I can write equations using a variable to represent the unknown.
- I can use estimation, rounding, or mental math strategies to check my answer.
- I can complete input/output tables.
- I can find the unknown in simple equations.
- I can divide a 4 digit number by a 1 digit number. I can explain my chosen strategy for solving the problem.
- I can use an array to explain a division problem.
- I can double-check my quotient by performing multiplication to verify my answer is correct.

ESSENTIAL QUESTIONS

Choose a few questions based on the needs of your students.

- What is a product?
- What is the difference between a factor and product?
- How will diagrams help us determine and show the products of two-digit numbers?
- How can I effectively explain my mathematical thinking and reasoning to others?
- What is a sensible answer to a real problem?
- What information is needed in order to round whole number to any place?
- How can I ensure my answer is reasonable?
- What effect does a remainder have on my rounded answer?
- How can I mentally compute a division problem?
- What are compatible numbers and how do they aid in dividing whole numbers?
- How are multiplication and division related to each other?
- What are some simple methods for solving multiplication and division problems?
- What patterns of multiplication and division can assist us in problem solving?
- How can we find evidence to support our conclusions?
- How can we use clues and reasoning to find an unknown number?
- How do multiplication, division, and estimation help us solve real world problems?
- How can we organize our work when solving a multi-step word problem?

Prerequisite Vocabulary: Divide One-digit Number Range 1-100 Remainder Whole Number **New Vocabulary:** Composite Factor Pairs Prime Factor Dividend Divisor Quotient	Notes
Formative Exit Slips….show what you know Observation Individual white boards 4 Corners: Strongly agree Agree Disagree Strongly disagree Think, Pair, and Share Math Journal Thumbs up, Thumbs in the Middle, Thumbs Down	**Summative** Division Unit 4 Assessment 4 Week Progress Reports

Lessons	Resources
Meaning of Division Division Grouping Vocabulary Foldable/Create Anchor Chart Long Division Steps/Anchor Chart Checking Quotients with Multiplication Quiz More Long Division + Quiz Dividing All Stars Fact Family Project Even Bigger Division Variables Word Problems Unit Review Assessment	Teachers Pay Teachers – Store – EmilyB-8900

MATH UNIT 5 – GEOMETRY
3-4 week unit
Unit Summary

The purpose of this unit is for students to draw and identify lines and angles, and classify shapes by properties of their lines and angles.

In this unit students will:

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines
- Identify and classify angles and identify them in two-dimensional figures
- Distinguish between parallel and perpendicular lines and use them in geometric figures
- Identify differences and similarities among two dimensional figures based on the absence or presence of characteristics such as parallel or perpendicular lines and angles of a specified size
- Sort objects based on parallelism, perpendicularity, and angle types
- Recognize a right triangle as a category for classification
- Identify lines of symmetry and classify line-symmetric figures
- Draw lines of symmetry

Title of Unit	**Subject Area**
Unit 5 – Geometry	4th Grade Math

Common Core State Standards

STANDARDS FOR MATHEMATICAL CONTENT

4.G Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

MCC4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

MCC4.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.

MCC4.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.

STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them. *Students will make sense of problems and persevere in solving them by exploring and investigating properties of geometric figures and lines of symmetry.*
2. Reason abstractly and quantitatively. *Students will reason abstractly and quantitatively by comparing, contrasting, and classifying two-dimensional shapes and determining their lines of symmetry.*
3. Construct viable arguments and critique the reasoning of others. *Students will construct viable arguments and critique reasoning when determining the properties of geometric shapes and determining their lines of symmetry.*
4. Model with mathematics. *Students will model with mathematics by drawing, folding, tracing, constructing lines of symmetry, and categorizing two-dimensional shapes on graphic organizers and charts based on their properties.*
5. Use appropriate tools strategically. *Students will use appropriate tools such as geometric shapes, corners of paper, tiles, rulers, protractors, and graphic organizers to determine angles, classify two-dimensional shapes, and draw lines of symmetry.*
6. Attend to precision. *Students will attend to precision when observing and determining the attributes of sides and degree of angles within geometric shapes.*
7. Look for and make use of structure. *Students will look for and make sense of structure when exploring properties of geometric shapes and determining how to fold them to show lines of symmetry.*
8. Look for and express regularity in repeated reasoning. *Students will look for and express regularity in repeated reasoning while exploring the geometric properties of two-dimensional shapes by comparing, contrasting, classifying, and identifying lines of symmetry.*
*****Mathematical Practices 1 and 6 should be evident in EVERY lesson*****

"I Can" Statements:

- I can draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.
- I can look for, identify and draw: points, line segments, angles, and perpendicular and parallel lines in 2-dimensional objects.
- I can identify: points, line segments, angles, and perpendicular and parallel lines in 2-dimensional figures.
- I can classify triangles as right angles or not.
- I can recognize lines of symmetry for a 2-dimensional figure.
- I can create a line of symmetry by folding and matching parts of a model.
- I can draw lines of symmetry for a 2-dimensional figure.

ESSENTIAL QUESTIONS Choose a few questions based on the needs of your students.

- How are geometric objects different from one another?
- How are quadrilaterals alike and different?
- How are symmetrical figures created?
- How are symmetrical figures used in artwork?
- How are triangles alike and different?
- How can angle and side measures help us to create and classify triangles?
- How can shapes be classified by their angles and lines?
- How can the types of sides be used to classify quadrilaterals?
- How can triangles be classified by the measure of their angles?
- How can we sort two-dimensional figures by their angles?
- How can you create different types of quadrilaterals?
- How can you create different types of triangles?
- How can you determine the lines of symmetry in a figure?
- How can you use only a right angle to classify all angles?
- How do you determine lines of symmetry? What do they tell us?
- How is symmetry used in areas such as architecture and art? In what areas is symmetry important?
- What are the geometric objects that make up figures?
- What are the mathematical conventions and symbols for the geometric objects that make up certain figures?
- What are the properties of quadrilaterals?
- What are the properties of triangles?
- What are triangles?
- What is a quadrilateral?
- What is symmetry?
- What makes an angle a right angle?
- What properties do geometric objects have in common?
- Where is geometry found in your everyday world?
- Which letters of the alphabet are symmetrical?

Prerequisite Vocabulary:				Notes
Circle	Hexagon	Quadrilateral	Square	
Cone	Kite	Rectangle	Trapezoid	
Cube	Pentagon	Rhombus	Triangle	
Cylinder	Points	Sphere	Two Dimensional Figures	
Figures	Polygon			
New Vocabulary:				
Right Angles				
Acute Angles				
Obtuse Angles				
Line of Symmetry				
Parallel Lines				
Perpendicular Lines				
Rays				
Equilateral Triangle/Isosceles Triangle/Scalene Triangle				

Formative	**Summative**
Exit Slips….show what you know	Unit 5 Performance Task Assessment (Geometry Town)
Observation	
Individual white boards	
4 Corners: Strongly agree	4 Week Progress Report
Agree	
Disagree	
Strongly disagree	
Quick Quiz	
Think, Pair, and Share	
Math Journal	
Thumbs up, Thumbs in the Middle, Thumbs Down	
Worksheet	

Lessons

Task Name	Task Type/Grouping Strategy	Content Addressed	Standard(s)
What Makes a Shape?	Scaffolding Task *Partners/Groups*	Learning conventions for the parts of a shape	MCC4.G.1
Angle Shape Sort	Practice Task *Partners*	Sorting shapes by angles	MCC4.G.1
Is This the Right Angle?	Practice Task *Large Group/Individual*	Comparing angles	MCC4.G.1
Be an Expert	Practice Task *Partners/Groups*	Refine/extend understanding of geometric objects	MCC4.G.1
Thoughts About Triangles	Constructing Task *Partners/Groups*	Investigate and explain properties of triangles	MCC4.G.1 MCC4.G.2
My Many Triangles	Practice Task *Individual/Partner*	Classify triangles by their angles and length of sides	MCC4.G.1 MCC4.G.2
Quadrilateral Roundup	Constructing Task *Partners/Groups*	Investigate and explain the properties of quadrilaterals	MCC 4.G.1 MCC4.G.2
Superhero Symmetry	Scaffolding Task *Partners*	Explore the meaning of symmetry and symmetrical figures	MCC4.G.3
Line Symmetry	Constructing Task *Partner/Groups*	Explore the meaning of symmetry and symmetrical figures	MCC4.G.3
A Quilt of Symmetry	Constructing Task *Individual/Partners*	Using symmetry to design a quilt	MCC4.G.3
Decoding ABC Symmetry	Practice Task *Individual/Partners*	Finding lines of symmetry in the alphabet	MCC4.G.3
Geometry Town	**Culminating Task** Individuals/Partners	Using geometry knowledge to design a town of certain specifications	MCC4.G.1 MCC4.G.2 MCC4.G.3

Resources

Georgia Common Core State Standards Geometry Unit Plans: Grade 4

MATH UNIT 6– Fraction
4-5 week unit
Unit Summary
Understand decimal notation for fractions, and compare decimal fractions.
In this unit students will:

- Understand representations of simple equivalent fractions
- Compare fractions with different numerators and different denominators
- Identify visual and written representations of fractions
- Understand representations of simple equivalent fractions
- Understand the concept of mixed numbers with common denominators to 12
- Add and subtract fractions with common denominators
- Add and subtract mixed numbers with common denominators
- Convert mixed numbers to improper fractions and improper fractions to mixed fractions
- Understand a fraction a/b as a multiple of 1/b. (for example: model the product of ¾ as 3 x ¼).
- Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.
- 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.
- Multiply a whole number by a fraction
- Express fractions with denominators of 10 and 100 as decimals
- Understand the relationship between decimals and the base ten system
- Understand decimal notation for fractions
- Use fractions with denominators of 10 and 100 interchangeably with decimals
- Express a fraction with a denominator 10 as an equivalent fraction with a denominator 100
- Add fractions with denominators 10 and 100 (including adding tenths and hundredths)
- Compare decimals to hundredths by reasoning their size
- Understand that comparison of decimals is only valid when the two decimals refer to the same whole
- Justify decimals comparisons using visual models

Title of Unit	**Subject Area**
Unit 6 – Fractions	Math

STANDARDS FOR MATHEMATICAL CONTENT

4.NF Understand decimal notation for fractions and compare decimal fractions.

MCC4.NF.1 Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

MCC4.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.

MCC4.NF.3 Understand a fraction a/b with a > 1 as a sum of fractions 1/b.
a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
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.
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.
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.

MCC4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
a. Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).
b. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)
c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

MCC4.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. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/1001**.**

MCC4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.

MCC4.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 the comparisons with the symbols >, =, or <, and justify the conclusions, e.g. by using a visual model.

STANDARDS FOR MATHEMATICAL PRACTICES

This section provides examples of learning experiences for this unit that support the development of the proficiencies described in the Standards for Mathematical Practice. These proficiencies correspond to those developed through the Literacy Standards. The statements provided offer a few examples of connections between the Standards for Mathematical Practice and the Content Standards of this unit. This list is not exhaustive and will hopefully prompt further reflection and discussion.

1. Make sense of problems and persevere in solving them. Students with express fractions with a denominator of 10 as an equivalent fraction with a denominator of 100, i.e. 5/10 is equivalent to 50/100.

2. Reason abstractly and quantitatively. Students will order decimal fractions to hundredths on a number line or with visual models and understand that fraction equivalency is only valid when comparing parts of the same whole.

3. Construct viable arguments and critique the reasoning of others. Students will communicate why one decimal or fraction is either >, =, or <, another decimal or fraction and be able to question the interpretations of others of the same decimals and fractions.

4. Model with mathematics. Students will use base ten models (blocks, number lines, etc.) to relative size of decimals and fractions and use same models to represent fraction and decimal equivalency.

5. Use appropriate tools strategically. Students will determine which tools (blocks, number lines, etc.) would be best used to represent situations involving decimals and decimal fractions.

6. Attend to precision. Students attend to the language of real-world situations to order decimals and decimal fractions.

7. Look for and make use of structure. Students relate the structure of number lines and base ten models to the ordering of decimals and decimal fractions. Furthermore, students will relate the structure of the models to fractional and decimal equivalency.

8. Look for and express regularity in repeated reasoning. Students will use mathematical reasoning to relate new experiences with similar experiences when dealing with fractional and decimal equivalency and with ordering decimals to hundredths**.**

"I Can" Statements:

- I can describe what a fraction is and the parts of a fraction.
- I can use fraction bars, number lines, and parts of a group models, and circle models to represent a fraction.
- I can name and color fractions using a bar graph.
- I can label fractions on a number line.
- I can use pattern blocks to create fractions.
- I can label a ruler's sections using fractions.
- I can use charts, graphs, and bar lines to solve equivalent fraction problems.
- I can use multiplication and division to find equivalent fractions.
- I can put a fraction in its simplest form using its greatest common factor.
- I can compare fractions using fraction bars, number lines, ½ as a benchmark, and by looking for common numerators or denominators.
- I can compare fractions using fraction bars, number lines, ½ as a benchmark, and by looking for common numerators or denominators.
- I can compare fractions by finding common denominators.
- I can compare fractions by using the cross multiplication method.
- I can put fractions in order by using my understanding of comparing fractions.
- I can decompose fractions and mixed numbers.
- I can change mixed numbers to improper fractions and improper fractions to mixed numbers.
- I can add and subtract fractions and mixed numbers.
- I can solve and create word problems by adding and subtracting fractions.
- I can add fractions with denominators of 10 and 100.
- I can multiply fractions by a whole number.
- I can solve and create word problems by multiplying fractions.
- I can solve real world fraction problems.
- I can relate fractions and decimals.
- I can change fractions to decimals using tenths and hundredths.
- I can change decimals to fractions using tenths and hundredths.
- I can compare decimals and order decimals.

ESSENTIAL QUESTIONS

Choose a few questions based on the needs of your students.

- How are decimal fractions written using decimal notation?
- How are decimal numbers and decimal fractions related?
- How are decimals and fractions related?
- How can I combine the decimal length of objects I measure?
- How can I model decimals fractions using the base-ten and place value system?
- How can I write a decimal to represent a part of a group?
- How does the metric system of measurement show decimals?
- What are the benefits and drawbacks of each of these models?
- What are the characteristics of a decimal fraction?
- What is a decimal fraction and how can it be represented?
- What models can be used to represent decimals?
- What patterns occur on a number line made up of decimal fractions?
- What role does the decimal point play in our base-ten system?
- When adding decimals, how does decimal notation show what I expect? How is it different?
- When can tenths and hundredths be used interchangeably?
- When is it appropriate to use decimal fractions?
- When we compare two decimals, how do we know which has a greater value?
- When you compare two decimals, how can you determine which one has the greater value?
- Why is the number 10 important in our number system?

Prerequisite Vocabulary: <,>,=, symbols Different Numerators Fractions Whole Different Denominators Equivalent Number Denominator Factor Multiple Numerator Equation (s) **New Vocabulary:** Benchmark Fractions (1/2) Common Denominators Principle of Equivalent Fractions Size of Parts Visual Fraction Model Equivalent Fractions Mixed Numbers Decimal Notation Decimals Hundredths Tenths	Notes
Formative Exit Slips….show what you know Observation Individual white boards 4 Corners: Strongly agree Agree Disagree Strongly disagree Quick Quiz Think, Pair, and Share Math Journal Thumbs up, Thumbs in the Middle, Thumbs Down	**Summative** Fraction Unit 6 Assessment 4 Week Progress Report

Lessons

1. What is a fraction and how do you represent a fraction?
2. Name and color fractions. Place fractions on a timeline.
3. Pattern Blocks Fractions and Ruler Fractions.
4. Equivalent Fraction Bars and Equivalent Fractions with 10 and 100 denominators.
5. Using Multiplication and Division to find Equivalent Fractions.
6. Simplest Form
7. Comparing Fractions using Bar Graphs
8. Comparing Fractions using Number Lines and ½ as a Benchmark
9. Finding Common Denominators and Cross Multiplication
10. Ordering Fractions
11. Decomposing Fractions and Mixed Numbers
12. Mixed Numbers to Improper Fractions and Improper Fractions to Mixed Numbers
13. Adding and Subtracting Fractions and Mixed Numbers
14. Word Problems: Adding and Subtracting Fractions
15. Adding Fractions with Denominators of 10 and 100
16. Multiplying Fractions
17. Word Problems: Multiplying Fractions
18. Real World Problems: Multiplying Fractions
19. Relating Fractions and Decimals
20. Fractions to Decimals and Decimals to Fractions
21. Comparing and Ordering Decimals

Resources

Worksheets:
80+ Fraction Printables by Rebecca Rojas

Book:
Piece=Part=Portion by Scott Gifford.

Other:
Playing Cards
Beads
Yarn

MATH UNIT 7 – Measurement
4-5 week unit
Unit Summary

The purpose of this unit is to understand the relative size of measurement units. Within a single system of measurement, measurements in a larger unit can be expressed in terms of a smaller unit. There are agreed upon units of measure (customary and metric), as well as non-standard units of measure that can be used to measure objects. It is important to choose a uniform unit of measure when measuring an object. Fractional concepts are deepened through experiences and situations involving measurement.

In this unit students will:

- investigate what it means to measure length, weight, volume, time, and angles
- understand how to use standardized tools to measure length, weight, volume, time, and angles
- understand how different units within a system (customary and metric) are related to each other
- know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec.
- solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals.
- make a line plot to display a data set of measurements in fractions of a unit (1/2, ¼, 1/8)
- solve problems involving addition and subtraction of fractions by using information presented in line plots
- apply the area and perimeter formulas for rectangles in real world and mathematical problems.
- Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement
- Measure angles in whole number degrees using a protractor
- Recognize angle measurement as additive and 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.

Title of Unit	Subject Area
Unit 7 – Measurement	Math

Common Core State Standards

STANDARDS FOR MATHEMATICAL CONTENT

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

MCC4.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)

MCC4.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.

MCC4.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.
Represent and interpret data.

MCC4.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.
A line plot shows the "shape" of the data and provides the foundation for future data concepts, such as mode and range.
Geometric Measurement - understand concepts of angle and measure angles.

MCC4.MD.5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.
b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
MCC4.MD.6. Measure angles in whole-number degrees using a protractor.

Sketch angles of specified measure.
MCC4.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.

STANDARDS FOR MATHEMATICAL PRACTICE TO BE EMPHASIZED

This section provides examples of learning experiences for this unit that support the development of the proficiencies described in the Standards for Mathematical Practice. These proficiencies correspond to those developed through the Literacy Standards. The statements provided offer a few examples of connections between the Standards for Mathematical Practice and the Content Standards of this unit. The list is not exhaustive and will hopefully prompt further reflection and discussion.

1. Make sense of problems and persevere in solving them. Students will solve problems involving measurement and the conversion of measurements from a larger unit to a smaller unit.
2. Reason abstractly and quantitatively. Students will recognize angle measure as additive in relation to the reference to a circle.
3. Construct viable arguments and critique the reasoning of others. Students construct and critique arguments regarding the relative size of measurement units and relating them to everyday objects.
4. Model with mathematics. Students use line plots to display data of measurements in fractions of a unit.
5. Use appropriate tools strategically. Students select and use tools such as a ruler, balance, graduated cylinders, angle rulers and protractors to measure.
6. Attend to precision. Students will be careful about specifying units of measure and state the meaning of the symbols they choose.
7. Look for and make use of structure. Students use the structure of a two column table to generate a conversion table for measurement equivalents.
8. Look for and express regularity in repeated reasoning. Students notice repetitive actions in computations to make generalizations about conversion of measurements from a larger unit to a smaller unit.
*****Mathematical Practices 1 and 6 should be evident in EVERY lesson*****

"I Can" Statements:

- ✓ I can explain and compare the size of different units of measurement (km, m, cm, kg, g, lb, oz, l, ml, hr, min, and sec).
- ✓ I can convert larger units of measurement within the same system to smaller units and record conversions in a two-column table.
- ✓ I can use the four operations solve measurement 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.

- ✓ I can use models to represent measurement qualities.
- ✓ I can apply the area and perimeter formulas for rectangles in real world and mathematical problems.
- ✓ I can solve area and perimeter problems in which there is an unknown factor.
- ✓ I can create a line plot to display a data set of measurement given in fractions of a unit.
- ✓ I can analyze and interpret a line plot to solve problems involving addition and subtraction of work problems.
- ✓ I can recognize that a circle has 360˚ and I can explain that an angle is a fraction of a circle.
- ✓ I can describe angles as geometric shapes that are formed wherever two rays share a common endpoint, and explain concepts of angle measurement.
- ✓ I can measure and identify angles in whole-number degrees using a protractor.
- ✓ I can sketch angles of specified measure.
- ✓ I can recognize that an angle can be divided into smaller angles.
- ✓ I can use addition and subtraction to solve for the missing angle measurements on a diagram.

ESSENTIAL QUESTIONS Choose a few questions based on the needs of your students.

- About how heavy is a kilogram?
- Can different size containers have the same capacity?
- Does volume change when you change the measurement material? Why or why not?
- How are a circle and an angle related?
- How are area and perimeter related?
- How is data collected?
- How are fluid ounces, cups, pints, quarts, and gallons related?
- How are grams and kilograms related?
- How are the angles of a triangle related?
- How are the units of linear measurement within a standard system related?
- How are the units used to measure perimeter different from the units used to measure area?
- How are the units used to measure perimeter like the units used to measure area?
- How are units in the same system of measurement related?
- How can angles be combined to create other angles?
- How can fluid ounces, cups, pints, quarts, and gallons be used to measure capacity?
- How can we estimate and measure capacity?
- How can we measure angles using wedges of a circle?
- How can we use angle measures to draw reflex angles?
- How can we use the relationship of angle measures of a triangle to solve problems?
- How do graphs help explain real-world situations?
- How do we compare customary measures of fluid ounces, cups, pints, quarts, and gallons?
- How do we compare metric measures of milliliters and liters?
- How do we determine the most appropriate graph to use to display the data?
- How do we find the area of a rectangle?
- How do we find the perimeter of a rectangle?
- How do we make a line plot to display a data set?
- How do we measure an angle using a protractor?
- How do we measure volume?
- How do we use weight measurement?
- How does a circle help with measurement?
- How does a turn relate to an angle?

- How does the area change as the rectangle's dimensions change (with a fixed perimeter)?
- How heavy does one pound feel?
- How is a circle like a ruler?
- How is perimeter different from area?
- How will we interpret a set of data?
- What are benchmark angles and how can they be useful in estimating angle measures?
- What around us weighs about a gram?
- What around us weights about a kilogram?
- What connection can you make between the volumes of geometric solids?
- What do we actually measure when we measure an angle?
- What do we know about the measurement of angles in a triangle?
- What do you do if a unit is too heavy to measure an item?
- What does half rotation and full rotation mean?
- What happens to a measurement when we change units?
- What is a unit?
- What is an angle?
- What is the difference between a gram and a kilogram?
- What is the relationship between area and perimeter when the area is fixed?
- What is the relationship between area and perimeter when the perimeter is fixed?
- What is weight?
- What material is the best to use when measuring capacity?
- What material is the best to use when measuring volume?
- What should you do if a unit is too heavy to measure an item?
- What units are appropriate to measure weight?
- When do we use conversion of units?
- When should we measure with grams? Kilograms?
- Why are standard units important?
- Why are units important in measurement?
- Why do we measure weight?
- Why do we need a standard unit with which to measure angles?
- Why do we need to be able to convert between capacity units of measurement?
- Why is it important to be able to measure weight?

Prerequisite Vocabulary:

Addition		
Angles	Kilogram (kg)	Perimeter
Area		
Centimeter (cm)		
Circle	Length	Rectangles
Data Set	Line Plot	Subtraction
Decimals		
Diagrams	Liter (l)	System of Units
Equations	Measure	Units
Equivalence		
Fractions	Measurements	Width
Geometric Shapes		
Gram (g)	Meter (m)	
Inches (in)	Number Line	

Notes

Information **New Vocabulary** Additive Angle of Measure Center Circular Arc Conversion Table Distances Endpoint Formulas Intervals of Time Kilometer (km) Liquid Volumes Masses of Objects Measurement Scale Measurement Units (metric units of distance/mass and or weight/volume) Measurement Units (standard units distance/mass and or weight/volume) Measurement Units (units of time) Milliliter (ml) Pound (lb) Protractor Quantities Relative Sizes Single System Two-column Table Unknown Factor Unknown Angle Measure Width	

Formative Assessments Exit Slips….show what you know Observation Individual white boards Think, Pair, and Share Math Journal Thumbs up, Thumbs in the Middle, Thumbs Down	**Summative Assess.** Unit 7 Performance Task Assessment 4 week Progress Report

Lessons

Task Name	**Task Type/Grouping Strategy**	**Content Addressed**	**Standard(s)**
Measuring Mania	Constructing Task *Individual/Small Group Task*	Measure ½, ¼, and 1/8 inch sections on ruler	MCC4.MD.1
What's the Story?	Performance Task *Individual/Partner Task*	Make a line plot to display data to 1/8 inch	MCC4.MD.1 MCC4.MD.2 MCC4.MD.4
Perimeter and Area	Constructing Task *Individual/Partner*	Determine area and perimeter	MCC4.MD.2 MCC4.MD.3
Setting the Standard	Scaffolding Task *Small Group Task*	Understand and use a standard unit of measure (gram)	MCC4.MD.1
Worth the Weight	Scaffolding Task *Small Group Task*	Estimate and weigh items using grams and kilograms	MCC4.MD.1
A Pound of What?	Constructing Task *Small Group Task*	Understand and use pound as a measure of weight	MCC4.MD.1
Exploring an Ounce	Constructing Task *Small Group Task*	Understand and use an ounce as a measure of weight	MCC4.MD.1
Too Heavy? Too Light?	Constructing Task *Individual/Partner Task*	Problem solving that requires unit conversion within the same system	MCC4.MD.1 MCC4.MD.2
Capacity Line-Up	Scaffolding Task *Partner/Small group*	Estimate and measure metric capacity	MCC4.MD.1 MCC4.MD.2
More Punch Please!	Constructing Task *Individual/Partner task*	Measure capacity using customary units; Convert liquid measures within the	MCC4.MD.1 MCC4.MD.2

Materials

		customary system	
Water Balloon Fun!	Constructing Task *Individual/Partner Task*	Measure capacity using metric and customary units	MCC4.MD.1 MCC4.MD.2
Culminating Task: Dinner at the Zoo/Naptime at the Zoo	Performance Task *Individual/Partner Task*	Use weight measurement and weight conversion; apply area formula	MCC4.MD.1 MCC4.MD.2 MCC4.MD.3

Angle Measurement

Task Name	**Task Type/Grouping Strategy**	**Content Addressed**	**Standard(s)**
Which Wedge is Right?	Scaffolding Task *Partner task*	Use non-standard units to measure angles	MCC4.MD.5
Angle Tangle	Scaffolding Task *Individual/Partner task*	Use a 360° circle; Identify and use benchmark angles	MCC4.MD.5 MCC4.MD.7
Build an Angle Ruler	Scaffolding Task *Individual/Partner task*	Build and use an angle ruler	MCC4.MD.5 MCC4.MD.7
Guess My Angle!	Constructing Task *Whole group/Partner task*	Measure angles using a protractor	MCC4.MD.5 MCC4.MD.6 MCC4.MD.7
Turn, Turn, Turn	Constructing Task *Whole group task*	Use rotation to find angles	MCC4.MD.5 MCC4.MD.6 MCC4.MD.7
Summing It Up	Constructing Task *Individual/Partner task*	Explore the angle measures of a triangle	MCC4.MD.5 MCC4.MD.6 MCC4.MD.7
Culminating Task: Angles of Set Squares	Performance Task *Individual/Partner Task*	Combine shapes to make angles; Find measure of unknown angle of a triangle	MCC4.MD.5 MCC4.MD.6 MCC4.MD.7