Fourth Grade: Math Curriculum

Unit: Chapter 1 (Place Value, Addition, Subtraction to One Million)	Time: September	Standards:
Essential Questions • How can you describe the value of a Digit? • How can you read and write numbers through Hundred thousand? • How can you compare and order numbers? • How can you round numbers? • How can you rename a whole number? • How can you add whole numbers? • How can you subtract whole numbers? • How can you use the strategy *draw a diagram* To solve comparison problem with addition and subtraction?	**Essential Understandings** • I can describe the value of a digit. • I can read and write numbers through hundred thousand. • I can compare and order numbers. • I can round numbers. • I can rename a whole number. • I can add and subtract whole numbers. • I can use the strategy *draw a diagram* to solve comparison problems.	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.
Benchmark Assessment(s) ➢ SWBAT complete practice test that requires them to generalize place value understanding for multi-digit whole numbers with 80% accuracy (PARCC test prep workbook pgs. 11-16). 4NBT.A.1, 4NBT.A.2, 4NBT.A.3 ➢ SWBAT complete practice test that requires them to use place value understanding and properties of operations to perform multi-digit arithmetic with 80% accuracy (PARCC test prep workbook pgs. 17-18). 4NBT.B.4		**Other Assessments** ✓ Beginning-of-year Test ✓ Mid-Chapter Checkpoint ✓ Chapter 1 Test ✓ Multiplication Fact Quiz ✓ Show What you Know **Materials** • Go Math Student workbook • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Real World Project: (Developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends). Student workbook pg. 1-2. Online projects/Critical Area project pg. B1-B2 (via Think Central).
- Show What You Know – student workbook pg. 3.
- Grab and Go Activity Cards – 1, 4 (Orange, Purple)
- Grab and Go Readers – *Summing up a Pet's Needs, The World's Tallest Buildings*.
- Grab and Go Games - *#1 Tree Climb, #4 who's the Closest?*
- Chapter 1 STEM Activities - *Can Waves Cut Caves?, Air Masses and Fronts, Forewarned!, Our Place in Space, Like Mother-Like Daughter, Math and Science Skill – Think Central Teacher Resources*
- Vocabulary Builder – Student workbook pg. 4.
- Vocabulary Game - *Going to Space,* workbook pg. 4A.
- The Write Way – Journal activity, workbook pg. 4D.
- Personal Math Trainer - ThinkCentral

REINFORCEMENT

- Reteach workbook pages (chapter resource book)
- Personal Math Trainer (Think Central)
- Math on the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resource book)
- STEM Activities (Think Central)
- MEGA Math (Think Central)
- *i*Tools (Think Central)
- Advanced Learners Activities
- Extend the Project Activities (Real World/Critical Area Project-in Book & Think Central)

Suggested Websites

- www.firstinmath.com
- www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- GoMath! Manipulative Set
- GoMath! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2 – Apply appropriate academic and technical skills.
CRP4 –Communicate clearly and effectively with reason.
CRP6 – Demonstrate creativity and innovation.
CRP8 – Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11 – Use technology to enhance productivity.

Technology

8.1.5.A.1 – Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.3 – Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 – Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

SEL

- ***Relationship Skills: Utilize positive communication and social skills to interact effectively with others***
- ***Responsible Decision-Making: Develop, implement and model effective problem solving and critical thinking skills***
- ***Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings***
- ***Self-Management: Recognize the skills needed to establish and achieve personal and educational goals***
- ***Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges***

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 2 (Multiply by 1 – Digit Numbers)	Time: October	Standards:
Essential Questions • How can you model multiplication comparisons to solve problems? • How can you estimate products by rounding and determine if exact answers are reasonable? • How can you use the Distributive Property to multiply? • How can you use mental math and properties to help you multiply numbers? • When can you use the draw a diagram strategy to solve a multistep multiplication problem? • How can you use regrouping to multiply? • How can you represent and solve multistep problems using equations?	**Enduring Understandings** • I can model multiplication comparisons. • I can estimate products by rounding. • I can use the Distributive Property to multiply a 2-digit number by a 1-digit number. • I can use mental math to multiply numbers. • I can use properties to help multiply numbers. • I can use regrouping to multiply numbers. • I can use equations to represent and solve problems.	4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret 35=5 x 7 as a statement that 35 is 5 times as many a 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. 4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison. 4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. 4.NBT.B.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.
Benchmark Assessment(s) ➢ SWBAT complete a practice test that requires them to use the four operations with whole numbers to solve problems with 80% accuracy (PARCC test prep workbook pgs. 1-6) 4.OA.A1, 4.OA.A2, and 4.OA.A3. ➢ SWBAT complete a practice test that requires them use place value understanding and properties of operations to perform multi-digit arithmetic with 80% accuracy (PARCC test prep workbook pgs. 19-20) 4.NBT.B.5.		**Other Assessments** ✓ Mid-Chapter Checkpoint (Chapter 2) ✓ Chapter 2 Test ✓ Multiplication Fact Quiz ✓ Show What You Know **Materials** • Go Math! Student workbook (Chapter 2) • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know
- Grab and Go Activity: Cards 3 (Orange and Purple) and Card 5 (Orange, Blue, Purple)
- Grab and Go Readers: *Multiplying a Good Deed, Putting the World on a Page, Tickle My Memory.*
- Grad and Go Games: #1 Multiplication Marathon, # 7 Triangle Products.
- Chapter 2 STEM Activities: *Other Ways Plants Grow, Life in Full Circle, Heat Proofing – Do the Math!* Think Central Teacher Resources
- Vocabulary Builder - pg.62
- Vocabulary Game – *Pick It*, pg. 62 A-B
- Personal Math Trainer – Think Central

REINFORCEMENT

- Reteach worksheet pages (chapter resources book)
- Personal Math Trainer (Think Central)
- Math On the Spot video
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resources book)
- STEM activities (Think Central)
- Mega Math (Think Central)
- iTools (Think Central)
- Advances Learners Activities
- Extend the Project Activities (Real World/Critical Area Project- In book & Think Central)

Suggested Websites

- First In Math Games- http://www.firstinmath.com
- Multiplication Games http://www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- Go Math! Manipulatives Set
- Go Math! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11. Use technology to enhance productivity.

Technology

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
8.2.5.C4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

SEL

- ***Relationship Skills: Utilize positive communication and social skills to interact effectively with others***
- ***Responsible Decision-Making: Develop, implement and model effective problem solving and critical thinking skills***
- ***Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings***
- ***Self-Management: Recognize the skills needed to establish and achieve personal and educational goals***
- ***Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges***

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 3 (2-Digit Numbers)	Time: November	Standards:
Essential Questions • What strategies can you use to multiply by tens? • What strategies can you use to estimate products? • How can you use area models and partial products to multiply 2-digit numbers? • How can you use place value and partial products to multiply 2-digit numbers? • How can you use regrouping to multiply 2-digit numbers? • How can you find and record products of two 2-digit numbers? • How can you use the strategy *Draw a Diagram* to solve multistep multiplication problems?	**Enduring Understandings** • I can use place value and multiplication properties to multiply by tens. • I can estimate products by rounding or by using compatible numbers. • I can use area models, place value, and partial products to multiply 2-digit numbers. • I can use regrouping to multiply 2-digit numbers. • I can choose a method to multiply 2-digit numbers. • I can use the strategy *draw a diagram* to solve multistep multiplication problems.	4. NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. 4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
Benchmark Assessment(s) ➢ SWBAT complete practice test that requires them to use place value understanding and properties of operations to perform multi-digit arithmetic with 80% accuracy (PARCC test prep workbook pgs. 17-20) 4NBT.B.5 ➢ SWBAT complete practice test that requires them to use the four operations with whole numbers to solve problems with 80% accuracy (PARCC test prep workbook pgs. 5-6). 4.0A.A.3		**Other Assessments** ✓ Mid-Chapter Checkpoint ✓ Chapter 3 Test ✓ Show What you Know ✓ Multiplication Fact Quiz **Materials** • GoMath! Student workbook • GoMath! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Grab and Go Activity Card 3 (BLUE) 5 (ORANGE, PURPLE)
- Chapter 3 STEM Activities - *Lunar and Solar Calendars, The Food Eaters* – Think Central.
- Vocabulary game – *Matchup,* student workbook pg. 144A.
- Show What You Know – student workbook pg. 143.
- Vocabulary Builder – student workbook pg. 144.
- The Write Way, student workbook pg. 144B.
- Grab and Go Readers – *Multiplying a Good Deed, Putting the World on a Page*
- Grab and Go Games - #5 Multiplication Marathon, #7 Triangle Products
- Personal Math Trainer – Think Central

REINFORCEMENT

- Reteach worksheet pages (chapter resource book)
- Personal Math Trainer (Think Central)
- Math on the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resource book)
- STEM Activities (Think Central)
- MEGA Math (Think Central)
- iTools (Think Central)
- Advanced Learners Activities
- Extend the Project Activities (Real World/Critical Area Project-in Book & Think Central)

Suggested Websites

- www.multiplication.com
- www.Firstinmath.com
- www.thinkcentral.com

Suggested Materials

- GoMath! Manipulative Set
- Go Math! Grab and Go activity center

Cross-Curricular Connections

21st Century Skills

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Technology

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SEL

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Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 4 (Divide by 1 – Digit Numbers)	Time: November/December	Standards:
Essential Questions • How can you use multiples and compatible numbers to estimate quotients? • How can you use models to divide whole numbers that do not divide evenly? • How can you divide numbers through thousands by whole numbers to 10? • How can you use the Distributive Property, repeated subtraction, and multiples to find quotients? • How can you use remainders, partial quotients, and base ten blocks to divide? • How can you divide multi-digit numbers and check your answers? • How can you use the strategy draw a diagram to solve multistep division problems?	**Enduring Understandings** • I can use multiples and compatible numbers to estimate quotients. • I can divide numbers through thousands by whole numbers to 10. • I can estimate quotients. • I can use Distributive Property, repeated subtraction and multiples to find quotients. • I can use partial quotients and base ten blocks to divide. • I can divide multi-digit numbers and check your answers. • I can use the strategy draw a diagram to solve multistep division problems.	4.NBT.B.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, 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. 4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
Benchmark Assessment(s) ➢ SWBAT complete a practice test that requires them to use place value understanding and properties of operations to perform multi-digit arithmetic with 80% accuracy (PARCC test prep workbook pgs. 21-22) 4.NBT.B.6 ➢ SWBAT complete a practice test that requires them to use the four operations with whole numbers to solve problems with 80% accuracy (PARCC test prep workbook pgs. 5-6) 4.OA.A.3		**Other Assessments** ✓ Mid-Chapter Checkpoint (Chapter 4) ✓ Chapter 4 Test ✓ Multiplication Fact Quiz ✓ Show What You Know **Materials** • Go Math! Student workbook (Chapter 4) • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know
- Grab and Go Activity: Cards #3 (Purple), Card #7 (Orange, Blue, Purple) Card# 9 (Orange, Blue, Purple).
- Grab and Go Readers: *The Division Champs, The Thirst Quencher.*
- Grad and Go Games: Divide All Five #3, Divide to Win #11, Remainder or Not? #9
- Chapter 2 STEM Activities: *Follow Down Slope, Fast and Slow.* Think Central Teacher Resources
- Vocabulary Builder pg.196
- Vocabulary Game - *Picture It*, pg. 196 A
- The Write Way – Journal Activity, pg. 196B
- Personal Math Trainer – Think Central

REINFORCEMENT

- Reteach worksheet pages (chapter resources book)
- Personal Math Trainer (Think Central)
- Math On the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resources book)
- STEM activities (Think Central)
- Mega Math (Think Central)
- iTools (Think Central)
- Advances Learners Activities
- Extend the Project Activities (Real World/Critical Area Project- In book & Think Central)

Suggested Websites

- **First In Math Games-** http://www.firstinmath.com
- **Multiplication Games** http://www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- Go Math! Manipulatives Set
- Go Math! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2. Apply appropriate academic and technical skills.
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CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11. Use technology to enhance productivity.

Technology

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
8.2.5.C4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

SEL

- ***Relationship Skills: Utilize positive communication and social skills to interact effectively with others***
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Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 5 (Factors, Multiples and Patterns)	**Time: January**	**Standards:**
Essential Questions • How can you use models to find factors? • How can you tell whether one number is a factor of another number? • How can you the *Make a List* strategy to solve problems with common factors? • How are factors and multiples related? • How can you tell whether a number is prime or composite? • How can you tell whether a number is prime or composite? • How can you make and describe patterns?	**Enduring Understandings** • I can use models to find factors. • I can tell whether a number is prime or composite or if it is a factor of another number. • I can use the *Make a List* strategy to solve problems with common factors. • I can tell how factors and multiples are related. • I can make and describe patterns.	4.OA.B.4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given ine-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. 4.OA.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.
Benchmark Assessment(s) ➢ SWBAT complete practice test that requires them to have familiarity with factors and multiples with 80% accuracy (PARCC test prep workbook pgs. 7-8). 4.OA.B.4 ➢ SWBAT complete practice test that requires them to generate and analyze patterns with 80% accuracy (PARCC test prep workbook pgs. 9-10). 4.oA.C.5		**Other Assessments** ✓ Mid-Chapter Checkpoint ✓ Chapter 5 Test ✓ Multiplication Fact Quiz ✓ Show What you Know
		Materials • Go Math Student workbook • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Grab and Go Activity Card# 3 (PURPLE) #5 #15 (ORANGE) #17 (ORANGE, BLUE)
- Grab and Go Reader – *Eratosthenes and His Sieve*
- Grab and Go Game #13 – *Factor Farm*
- STEM Activities – *Flash and Boom!* - ThinkCentral Teacher Resources
- Show What You Know – student workbook pg. 277
- Vocabulary Builder – student workbook pg. 278
- Vocabulary Game - *Guess the Word* - student workbook pg. 278A
- The Write Way – Journal Activity – student workbook pg. 278
- Personal Math Trainer – ThinkCentral Teacher Resources

REINFORCEMENT

- Reteach workbook pages (chapter resource book)
- Personal Math Trainer (Think Central)
- Math on the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resource book)
- STEM Activities (Think Central)
- MEGA Math (Think Central)
- iTools (Think Central)
- Advanced Learners Activities
- Extend the Project Activities (Real World/Critical Area Project-in Book & Think Central)

Suggested Websites

- www.firstinmath.com
- www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- GoMath! Manipulatives Set
- GoMath! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

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Technology

8.1.5.A.1 – Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.3 – Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 – Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

SEL

- ***Relationship Skills: Utilize positive communication and social skills to interact effectively with others***
- ***Responsible Decision-Making: Develop, implement and model effective problem solving and critical thinking skills***
- ***Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings***
- ***Self-Management: Recognize the skills needed to establish and achieve personal and educational goals***
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Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 6 (Fraction Equivalence and Comparison)	Time: January/February	Standards:
Essential Questions • How can you use models and multiplication to find equivalent fractions? • How can you write fractions in the simplest form? • How can you write a pair of fractions using common denominator? • How can you use the strategy make a table to solve problems using equivalent fractions? • How can you compare and order fractions?	**Enduring Understandings** • I can use models and multiplication to find equivalent fractions. • I can write fractions in the simplest form. • I can write a pair of fractions using common denominator. • I can use the strategy make a table to solve problems using equivalent fractions • I can compare and order fractions.	4.NF.A.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. 4.NF.A.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record results of comparisons with symbols >, =, <, and justify the conclusions, e.g., by using a visual fraction model.
Benchmark Assessment(s) ➢ SWBAT complete a practice test that requires them to demonstrate understanding of fraction equivalence and ordering with 80% accuracy (PARCC test prep workbook pgs. 23-26) 4.NF.A.1 and 4.NF.A.2.		**Other Assessments** ✓ Mid-Chapter Checkpoint (Chapter 6) ✓ Chapter 6 Test ✓ Multiplication Fact Quiz ✓ Show What You Know ✓ Middle of Year Test – Chapter 6 Resources **Materials** • Go Math! Student workbook (Chapter 6) • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Real World Project: (developing an understanding of fraction equivalence, addition, and subtraction of fractions by whole numbers) Student workbook pg.323 and Critical Area Projects pg. 324 (via Think Central).
- Show What You Know
- Grab and Go Activity: Cards #6 (Orange, Blue, and Purple)# 8 (Purple).
- Grab and Go Readers: *Fundraising Fair, A Melody in Fractions, Sleeping Half the Day Away*.
- Grad and Go Games: Fraction Action #6
- Chapter 6 STEM Activities: *What Goes Up Comes Down*. Think Central Teacher Resources
- Vocabulary Builder pg. 326
- Vocabulary Game – Going to San Francisco, pg. 326 A
- The Write Way – Journal Activity, pg. 326B
- Personal Math Trainer – Think Central

REINFORCEMENT

- Reteach worksheet pages (chapter resources book)
- Personal Math Trainer (Think Central)
- Math On the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resources book)
- STEM activities (Think Central)
- Mega Math (Think Central)
- iTools (Think Central)
- Advances Learners Activities
- Extend the Project Activities (Real World/Critical Area Project- In book & Think Central)

Suggested Websites

- First In Math Games- http://www.firstinmath.com
- Multiplication Games http://www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- Go Math! Manipulatives Set
- Go Math! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11. Use technology to enhance productivity.

Technology

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
8.2.5.C4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

SEL

- *Relationship Skills: Utilize positive communication and social skills to interact effectively with others*
- *Responsible Decision-Making: Develop, implement and model effective problem solving and critical thinking skills*
- *Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings*
- *Self-Management: Recognize the skills needed to establish and achieve personal and educational goals*
- *Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges*

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 7 (Add and Subtract Fractions)	Time: February	Standards:
Essential Questions • When can you add or subtract parts of a whole? • How can you write a fraction as a sum of fractions with the same denominators? • How can you add fractions with denominators using models? • How can you subtract fractions with like denominators using models? • How can you add and subtract fractions with like denominators? • How can you rename mixed numbers as fractions greater than 1 and rename fractions greater than 1 as mixed numbers? • How can you add and subtract mixed numbers with like denominators? • How can you rename a mixed number to help you subtract? • How can you add fractions with like denominators using properties of addition? • How can you use the strategy *Act it Out* to solve multistep problems with fractions?	**Enduring Understandings** • I can add or subtract parts of a whole. • I can write a fraction as a sum of fractions with the same denominator. • I can add and subtract fractions and mixed numbers with like denominators. • I can rename mixed numbers as fractions greater than one and rename fractions greater than 1 as mixed numbers. • I can rename a mixed number to help me subtract. • I can add fractions with like denominators using properties of addition. • I can use the strategy *Act it Out* to solve multistep problems with fractions.	4.NF.B.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.
Benchmark Assessment(s) ➢ SWBAT complete practice test with 80% accuracy that requires them to build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. (PARCC test prep workbook pgs. 27-28) 4.NF.B.3a. (PARCC test prep workbook pgs. 29-30) 4.NF.B.3b. (PARCC test prep workbook pgs. 31-32), 4.NF.B.3c. (PARCC test prep workbook pgs. 33-34) 4.NF.B.3d.		**Other Assessments** ✓ Mid-Chapter Checkpoint ✓ Chapter 7 Test ✓ Multiplication Fact Quiz ✓ Show What you Know **Materials** • Go Math Student workbook • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know student workbook pg. 383
- Grab and Go Activity Cards #6 (BLUE, PURPLE), #8 (ORANGE, BLUE)
- Grab and Go Readers – *Sleeping Half the Day Away*
- Grab and Go Games - #6 Fraction Action, #10 Fraction Concentration
- STEM Activities – *Feeling Radiant, Where Does Water Go?, The Power of Pollen, Life on the Blue Planet.* Think Central Teacher Resources
- Vocabulary Builder – Student workbook pg. 384.
- Vocabulary Game - *Bingo*, workbook pg. 384A.
- The Write Way – journal activity, workbook pg. 384B.
- Personal Math Trainer – Think Central Teacher Resources

REINFORCEMENT

- Reteach workbook pages (chapter resource book)
- Personal Math Trainer (Think Central)
- Math on the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resource book)
- STEM Activities (Think Central)
- MEGA Math (Think Central)
- iTools (Think Central)
- Advanced Learners Activities
- Extend the Project Activities (Real World/Critical Area Project-in Book & Think Central)

Suggested Websites

- www.firstinmath.com
- www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- GoMath! Manipulatives Set
- GoMath! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2 – Apply appropriate academic and technical skills.
CRP4 –Communicate clearly and effectively with reason.
CRP6 – Demonstrate creativity and innovation.
CRP8 – Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11 – Use technology to enhance productivity.

Technology

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

8.1.5.A.3 – Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 – Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

SEL

- *Relationship Skills: Utilize positive communication and social skills to interact effectively with others*
- *Responsible Decision-Making: Develop, implement and model effective problem solving and critical thinking skills*
- *Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings*
- *Self-Management: Recognize the skills needed to establish and achieve personal and educational goals*
- *Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges*

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 8 (Multiply Fractions by Whole Numbers)	Time: March	Standards:
Essential Questions • How can you write a fraction as a product of a whole number and a unit fraction? • How can you use a model to multiply a fraction by a whole number to solve a problem? • How can you use the strategy draw a diagram to solve comparison problems with fractions?	**Enduring Understandings** • I can write a fraction as a product of a whole number and a unit fraction. • I can use a model to multiply a fraction by a whole number to solve a problem. • I can use the strategy draw a diagram to solve comparison problems with fractions.	4.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. a. Understand a multiple of *a/b* as a multiple of 1/*b*. *For example, use a visual fraction model to represent 5/4 as the product 5x (1/4), recording the conclusion by the equation 5/4=5 x (1/4).* b. Understand a multiple of *a/b* as a multiple of 1/*b* and use this understanding to multiply fraction by a whole number. *For example, use a visual fraction model to express 3 x (2/5) as 6 x (1/5), recognizing this product as 6/5. (In general, n x (a/b) = (n x 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?*
Benchmark Assessment(s) ➢ SWBAT complete a practice test that requires them to build fractions from unit fractions by applying and extending previous understandings or operations on while numbers with 80% accuracy (PARCC test prep workbook pgs. 35-40) 4.NF.B.4a, 4.NF.B.4b, and 4.NF.B.4c.		**Other Assessments** ✓ Mid-Chapter Checkpoint (Chapter 8) ✓ Chapter 8 Test ✓ Multiplication Fact Quiz ✓ Show What You Know
		Materials • Go Math! Student workbook (Chapter 8) • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know
- Grab and Go Activity: Cards #6 (Blue,Purple)
- Grab and Go Readers: *A Melody in Fractions.*
- Chapter 8 STEM Activities: How Do Soils Form? *How Does a Garden Grow?, Generating Electricity.* Think Central Teacher Resources
- Vocabulary Builder - pg. 454
- Vocabulary Game – *Pick It*, pg. 454A
- The Write Way – Journal Activity, pg. 454B
- Personal Math Trainer – Think Central

REINFORCEMENT

- Reteach worksheet pages (chapter resources book)
- Personal Math Trainer (Think Central)
- Math On the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resources book)
- STEM activities (Think Central)
- Mega Math (Think Central)
- iTools (Think Central)
- Advances Learners Activities
- Extend the Project Activities (Real World/Critical Area Project- In book & Think Central)

Suggested Websites

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- Multiplication Games http://www.multiplication.com
- www.thinkcentral.com

Suggested Materials

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- Go Math! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

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CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11. Use technology to enhance productivity.

Technology

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

8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
8.2.5.C4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

SEL

- *Relationship Skills: Utilize positive communication and social skills to interact effectively with others*
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- *Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings*
- *Self-Management: Recognize the skills needed to establish and achieve personal and educational goals*
- *Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges*

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 9 (Relate Fractions and Decimals)	Time: March	Standards:
Essential Questions • How can you record tenths as fractions and decimals? • How can you record hundredths as fractions and decimals? • How can you record tenths and hundredths as fractions and decimals? • How can you relate fractions, decimals, and money? • How can you use the strategy Act it Out to solve problems that use money? • How can you add fractions when the denominators are 10 or 100? • How can you compare decimals?	**Enduring Understandings** • I can record tenths and hundredths as fractions and decimals. • I can relate fractions, decimals and money. • I can use the strategy Act it Out to solve problems that use money. • I can add fractions when the denominators are 10 or 100. • I can compare decimals.	4.NF.C.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100 and add 3/10 + 4/100= 34/100. 4.NF.C.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram. 4.NF.C.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, +, or <, and justify the conclusions, e.g., by using a visual model. 4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
Benchmark Assessment(s) ➢ SWBAT complete practice test that requires them to understand decimal notation for fractions, and compare decimal fractions with 80% accuracy (PARCC test prep workbook pgs. 41-42) 4.NF.C.5. (PARCC test prep workbook pgs. 43-44) 4.NF.C.6. (PARCC test prep workbook pgs. 45-46) 4.NF.C.7. SWBAT complete practice test that requires them to solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit with 80% accuracy (PARCC test prep workbook pgs. 49-50) 4.MD.A.2		**Other Assessments** ✓ Mid-Chapter Checkpoint ✓ Chapter 9 Test ✓ Multiplication Fact Quiz ✓ Show What you Know **Materials** • Go Math Student workbook • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know – student workbook pg. 493.
- Grab and Go Activity Cards – #10 (ORANGE, BLUE)
- Grab and Go Readers – *And the Total Is…, Decimals on a Diamond, Elizabeth's Groovy Green Racing Machine, A Melody in Fractions.*
- Grab and Go Games - #6 Fraction Action, #16 Order Please.
- Chapter 1 STEM Activities – *You Have a Solution!, Go With the Flow… of Heat, Circuit Overload, Blowing in the Wind, Under Pressure, The Good and the Bad of it* - Think Central Teacher Resources
- Vocabulary Builder – Student workbook pg. 494.
- Vocabulary Game - *Matchup*, student workbook pg. 494A.
- Personal Math Trainer – Think Central Teacher Resources

REINFORCEMENT

- Reteach workbook pages (chapter resource book)
- Personal Math Trainer (Think Central)
- Math on the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resource book)
- STEM Activities (Think Central)
- MEGA Math (Think Central)
- iTools (Think Central)
- Advanced Learners Activities
- Extend the Project Activities (Real World/Critical Area Project-in Book & Think Central)

Suggested Websites

- www.firstinmath.com
- www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- GoMath! Manipulative Set
- GoMath! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2 – Apply appropriate academic and technical skills.
CRP4 –Communicate clearly and effectively with reason.
CRP6 – Demonstrate creativity and innovation.
CRP8 – Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11 – Use technology to enhance productivity.

Technology

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

8.1.5.A.3 – Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 – Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

SEL

- *Relationship Skills: Utilize positive communication and social skills to interact effectively with others*
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- *Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges*

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 10 (Two-Dimensional Figures)	Time: April	Standards:
Essential Questions • How can you identify and draw points, lines, line segments, rays, and angles? • How can you classify triangles by the size of their angles? • How can you identify and draw parallel lines and perpendicular lines? • How can you sort and classify quadrilaterals? • How do you find lines of symmetry? • How can you use the strategy act it out to solve pattern problems?	**Enduring Understandings** • I can identify and draw points, lines, line segments, rays, and angles. • I can classify triangles by the size of their angles. • I can identify and draw parallel lines and perpendicular lines. • I can sort and classify quadrilaterals. • I can find lines of symmetry. • I can use the strategy act it out to solve pattern problems.	4.G.A Draw and identify lines and angles, and classify shapes by properties of their lines and angles. 4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. 4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles. 4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.
Benchmark Assessment(s) ➢ SWBAT complete a practice test that requires them to draw and identify lines and angles, and classify shapes by properties of their lines and angles with 80% accuracy (PARCC test prep workbook pgs. 61-66) 4.G.A.1, 4.G.A.2, and 4.G.A.3. ➢ SWBAT complete a practice test that requires them to generate and analyze patterns with 80% accuracy (PARCC test prep workbook pgs. 9-10) 4.OA.C5.		**Other Assessments** ✓ Mid-Chapter Checkpoint (Chapter 10) ✓ Chapter 10 Test ✓ Multiplication Fact Quiz ✓ Show What You Know **Materials** • Go Math! Student workbook (Chapter 10) • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Real World Project: (Understanding that geometric figures can be analyzed and classified based on their properties) Student workbook pg.545 and Critical Area Projects pg. 546 (via Think Central).
- Show What You Know
- Grab and Go Activity: Card#13 (Orange, Blue, and Purple)
- Grab and Go Readers: *A Mirror Image, A New Angle on Trains and Train Stations, Skateboarding Takes Shape.*
- Chapter 10 STEM Activities: You Have a Solution. Think Central Teacher Resources.
- Vocabulary Builder pg. 548
- Vocabulary Game – *Going to a Botanical Garden*, pg. 548 A
- The Write Way – Journal Activity, pg. 548D
- Personal Math Trainer – Think Central

REINFORCEMENT

- Reteach worksheet pages (chapter resources book)
- Personal Math Trainer (Think Central)
- Math On the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resources book)
- STEM activities (Think Central)
- Mega Math (Think Central)
- iTools (Think Central)
- Advances Learners Activities
- Extend the Project Activities (Real World/Critical Area Project- In book & Think Central)

Suggested Websites

- First In Math Games- http://www.firstinmath.com
- Multiplication Games http://www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- Go Math! Manipulatives Set
- Go Math! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11. Use technology to enhance productivity.

Technology

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

8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
8.2.5.C4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

SEL

- *Relationship Skills: Utilize positive communication and social skills to interact effectively with others*
- *Responsible Decision-Making: Develop, implement and model effective problem solving and critical thinking skills*
- *Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings*
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- *Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges*

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 11 (Angles)	Time: April	Standards:
Essential Questions • How can you relate angles and fractional parts of a circle? • How are degrees related to fractional parts of a circle? • How can you use a protractor to measure and draw angles? • How can you determine the measure of an angle separated into parts? • How can you use the strategy *Draw a Diagram* to solve angle measurement problems?	**Enduring Understandings** • I can relate angles and fractional parts of a circle. • I can tell how degrees are related to fractional parts of a circle. • I can use a protractor to measure and draw angles. • I can determine the measure of an angle separated into parts. • I can use the strategy *Draw a Diagram* to solve angle measure problems.	4.MD.C.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 angles of measure of n degrees. 4.MD.C.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. 4.MD.C.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.
Benchmark Assessment(s) ➢ SWBAT complete practice test that requires them to understand concepts of angle and measure angles with 80% accuracy (PARCC test prep workbook pgs. 55-56) 4.MD.C.5a/4.MD.C.5b. (PARCC test prep workbook pgs. 57-58) 4.MD.C.6. (PARCC test prep workbook pgs. 59-60) 4.MD.C.7		**Other Assessments** ✓ Mid-Chapter Checkpoint ✓ Chapter 11 Test ✓ Multiplication Fact Quiz ✓ Show What you Know
		Materials • Go Math Student workbook • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know – student workbook pg.599.
- Grab and Go Activity Card #13 (ORANGE, BLUE)
- Grab and Go Readers – *Skateboarding Takes Shape*
- Chapter 11 STEM Activities – *Careers in Science, Other Models Scientist Use -*
  Think Central Teacher Resources
- Vocabulary Builder – Student workbook pg. 600.
- Vocabulary Game - *Picture it,* student workbook pg. 600A.
- The Write Way – Journal activity, student workbook pg. 600B.
- Personal Math Trainer – Think Central Teacher Resources

REINFORCEMENT

- Reteach workbook pages (chapter resource book)
- Personal Math Trainer (Think Central)
- Math on the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resource book)
- STEM Activities (Think Central)
- MEGA Math (Think Central)
- iTools (Think Central)
- Advanced Learners Activities
- Extend the Project Activities (Real World/Critical Area Project-in Book & Think Central)

Suggested Websites

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Suggested Materials

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Cross-Curricular Connections

21st Century Skills

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CRP11 – Use technology to enhance productivity.

Technology

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8.1.5.A.3 – Use a graphic organizer to organize information about problem or issue.
8.1.5.D.4 – Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

SEL

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- *Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings*
- *Self-Management: Recognize the skills needed to establish and achieve personal and educational goals*
- *Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges*

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 12 (Relative Sizes of Measurement)	Time: May	Standards:
Essential Questions • How can you use benchmarks to understand the relative sizes of measurement units? • How can you use models to compare customary units of length, weight, liquid volume, mass, and time? • How can you make and interpret line plots with fractional data? • How can you use the strategy draw a diagram to solve elapsed time problems? • How can you solve problems involving mixed measures? • How can you use patterns to write number pairs for measurement units?	**Enduring Understandings** • I can use benchmarks to understand the relative sizes of measurement units. • I can use models to compare customary units of length, weight, liquid volume, mass, and time. • I can make and interpret line plots with fractional data. • I can use the strategy draw a diagram to solve elapsed time problems. • I can solve problems involving mixed measures. • I can use patterns to write number pairs for measurement units.	4.*MD*.A Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. 4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4ft snake as 48in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), … 4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. 4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions 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.
Benchmark Assessment(s) ➢ SWBAT complete a practice test that requires them to solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit with 80% accuracy (PARCC test prep workbook pgs. 47-50) 4.MD.A.1 and 4.MD.A.2. ➢ SWBAT complete a practice test that requires them to represent and interpret data with 80% accuracy (PARCC test prep workbook pgs. 53-54) 4.MD.B.4.		**Other Assessments** ✓ Mid-Chapter Checkpoint (Chapter 12) ✓ Chapter 12 Test ✓ Multiplication Fact Quiz ✓ Show What You Know
		Materials • Go Math! Student workbook (Chapter 12) • Go Math! PARCC workbook

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know
- Grab and Go Game: Time to Go #12
- Grab and Go Activity: Card# 1 (Blue) Card# 14 (Orange, Blue, and Purple) Card #16 (Orange, Blue, and Purple).
- Grab and Go Readers: *Designing a Skatepark, Fighting Fire with Fire, Paint By Numbers.*
- Chapter 12 STEM Activities: *Measurement Tools, You're Getting Warmer, What is Technology?, So Different, Yet the Same, Ice Carvings, The Clean-Up Crew, Changes in Food Webs, Who Can Take the Cold?, Like Mother, Like Daughter, and Night and Day. Think Central Teacher Resources.*
- Vocabulary Builder pg. 640
- Vocabulary Game – *Bingo*, pg. 640A
- The Write Way – Journal Activity, pg. 640B
- Personal Math Trainer – Think Central

REINFORCEMENT

- Reteach worksheet pages (chapter resources book)
- Personal Math Trainer (Think Central)
- Math On the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resources book)
- STEM activities (Think Central)
- Mega Math (Think Central)
- iTools (Think Central)
- Advances Learners Activities
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Suggested Websites

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- Multiplication Games http://www.multiplication.com
- www.thinkcentral.com

Suggested Materials

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- Go Math! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

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CRP11. Use technology to enhance productivity.

Technology

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.
8.1.5.A.3 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.
8.1.5.D.4 Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
8.2.5.C4 Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.

SEL

- *Relationship Skills: Utilize positive communication and social skills to interact effectively with others*
- *Responsible Decision-Making: Develop, implement and model effective problem solving and critical thinking skills*
- *Social Awareness: Demonstrate an awareness of the expectations for social interactions in a variety of settings*
- *Self-Management: Recognize the skills needed to establish and achieve personal and educational goals*
- *Self-Awareness: Recognize the importance of self-confidence in handling daily tasks and challenges*

Date of BOE Approval: August 22, 2016

Fourth Grade: Math Curriculum

Unit: Chapter 13 (Algebra: Perimeter and Area)	Time: June	Standards:
Essential Questions • How can you use a formula to find the perimeter of a rectangle? • How can you use a formula to find the area of a rectangle? • How can you find the area of combined rectangles? • How can you find an unknown measure of a rectangle given its area or perimeter? • How can you use the strategy *solve a simpler problem* to solve area problems?	**Enduring Understandings** • I can use a formula to find the perimeter and area of a rectangle. • I can find the area of combined rectangles. • I can find an unknown measure of a rectangle given its area or perimeter. • I can use the strategy *solve a simpler problem* to solve area problems.	4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length between the longest and shortest specimens in an insect collection.
Benchmark Assessment(s) ➢ SWBAT complete practice test that requires them to solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit with 80% accuracy (PARCC test prep workbook pgs. 51-52) 4.MD.A.3		**Other Assessments** ✓ Mid-Chapter Checkpoint ✓ Chapter 13 Test ✓ Multiplication Fact Quiz ✓ Show What you Know
		Materials • Go Math Student workbook • Go Math! PARCC workbook

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Fourth Grade: Math Curriculum

SUGGESTED ACTIVITIES

- Show What You Know – student workbook pg. 715
- Grab and Go Activity Cards –#3 #4 (BLUE), #20 (ORANGE, BLUE, PURPLE)
- Grab and Go Readers – *Designing a Skate park, Fighting Fire with Fire, Paint by Numbers*
- Chapter 13 STEM Activities –*Pump Up the Volume* - Think Central Teacher Resources
- Vocabulary Builder – Student workbook pg. 716.
- Vocabulary Game - *Guess the Word*, student workbook pg. 716A
- The Write Way – Journal activity, workbook pg. 716B
- Personal Math Trainer – Think Central Teacher Resources

REINFORCEMENT

- Reteach workbook pages (chapter resource book)
- Personal Math Trainer (Think Central)
- Math on the Spot videos
- Response to Intervention Activities (Think Central)
- ELL Activities
- Strategic Intervention Guide (Think Central)
- Intensive Intervention Guide (Think Central)

ENRICHMENT

- Enrich worksheet pages (chapter resource book)
- STEM Activities (Think Central)
- MEGA Math (Think Central)
- iTools (Think Central)
- Advanced Learners Activities
- Extend the Project Activities (Real World/Critical Area Project-in Book & Think Central)

Suggested Websites

- www.firstinmath.com
- www.multiplication.com
- www.thinkcentral.com

Suggested Materials

- GoMath! Manipulative Set
- GoMath! Grab and Go Activity Center

Cross-Curricular Connections

21st Century Skills

CRP2 – Apply appropriate academic and technical skills.

CRP4 –Communicate clearly and effectively with reason.

CRP6 – Demonstrate creativity and innovation.

CRP8 – Utilize critical thinking to make sense of problems and persevere in solving them.

CRP11 – Use technology to enhance productivity.

Technology

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

8.1.5.A.3 – Use a graphic organizer to organize information about problem or issue.

8.1.5.D.4 – Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.

SEL

- *Relationship Skills: Utilize positive communication and social skills to interact effectively with others*
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