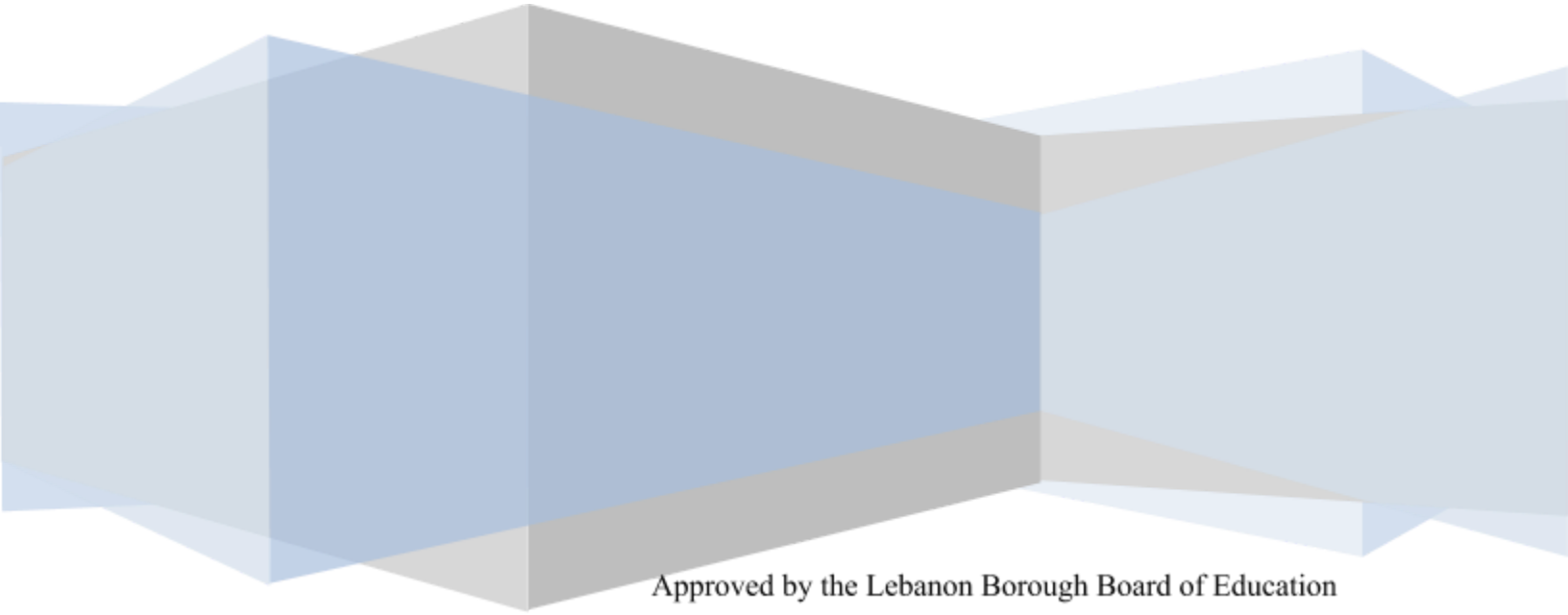
Lebanon Borough Public School

Mathematics

Curriculum Guide

Third Grade



Approved by the Lebanon Borough Board of Education

December 10, 2020/Revised:

Introduction

The Lebanon Borough School believes in celebrating the rich history of community partnerships created through sharing of services with neighboring school systems in Hunterdon County. This ensures a consistent, high quality instruction for all learners. The math curriculum is built upon this belief by incorporating the NJSLS Math Grade Level Standards within the components of a balanced literacy framework. This approach provides all students with equitable access to the same learning goals while allowing teachers the flexibility to adapt to the needs of their learners.

The standards below are overarching. While these standards may not appear specifically in any unit, they are the collective goals of all units.

In addition to the content standards for each grade level, the guides connect these to the critical mathematical practice standards as listed below:

- *Make sense of problems and persevere in solving them. (MP1))*
- *Reason abstractly and quantitatively. (MP2)*
- *Construct viable arguments and critique the reasoning of others. (MP3)*
- *Model with mathematics. (MP4)*
- *Use appropriate tools strategically. (MP5)*
- *Attend to precision. (MP6)*
- *Look for and make use of structure. (MP7)*
- *Look for and express regularity in repeated reasoning. (MP8)*

Third Grade Math At A Glance

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
MATH	**MATH**	**MATH**
Focus: **Numeration**	Focus: **Division**	Focus: **Liquid Volume & Mass**
Focus: **Number Sense**	Focus: **Fractions**	Focus: **2D Shapes and Their Attributes**
Focus: **Place Value**	Focus: **Time**	Focus: **Perimeter**
Focus: **Multiplication**		Focus: **Data**
Focus: **Area**		

Trimester Priority Standards

TRIMESTER 1		TRIMESTER 2		TRI	
NJSLS	**By the end of Trimester 1, students can:**	**NJSLS**	**By the end of Trimester 2, students can:**	**NJSLS**	**By the en 3, studer**
3.OA.1	use multiplication to figure out the total number of objects in an array or equal groups.	**3.OA.2**	divide to show how to share a set of objects equally. I can use division to divide a set of objects into equal groups.	**3.MD.2**	measure customar volume ar
3.OA.3	multiply to solve word problems.	**3.OA.3**	multiply divide to solve word problems.	**3.MD.3**	create a s scaled ba categorie problems
3.OA.5	use the properties of multiplication to solve problems.	**3.OA.4**	find a missing number in a multiplication of division problem.	**3.MD.4**	gather da inches an data on a

3.OA.7	multiply within 100.	**3.OA.5**	use the properties of multiplication and division to solve problems.	**3.MD.8**	solve polygons informati
3.OA.8	use the four operations to solve two-step word problems where a variable is used to represent an unknown quantity. I can use strategies to decide if my answer is reasonable.	**3.OA.6**	use my understanding of multiplication to solve division problems.	**3.G.1**	understar category can ident based on
3.OA.9	identify and explain patterns.	**3.OA.7**	multiply and divide within 100.	**3.G.2**	divide sha using frac part.
3.NBT.1	round a whole number to the nearest ten and nearest hundred.	**3.OA.8**	use the four operations to solve two-step word problems where a variable is used to represent an unknown quantity. I can use strategies to decide of my answer is reasonable.		
3.NBT.2	use strategies for adding and subtracting within 1000	**3.OA.9**	identify and explain patterns.		
3.NBT.3	use strategies to multiple one	**3.NF.1**	recognize fractions as parts of a		

	digit number by multiples of ten.		whole. I understand the difference between numerators and denominators.		**Science & E**
3.MD.5	understand area.	**3.NF.2**	understand that fractions can be represented on a number line.	**4.1**	represent graphical and/or pie Indicate re
3.MD.5a	use square units to measure area.	**3.NF.2a**	represent a fraction on a number line from 0 to 1.	**4.2**	analyze and phenomen computatio
3.MD.5b	find area by using square units laid side by side without gaps or overlaps.	**3.NF.2b**	divide a number line into equal parts in order to represent a fraction on a number line.		
3.MD.6	find areas by counting square units (customary and metric).	**3.NF.3**	compare fractions.		
3.MD.7	use multiplication and addition to solve for area.	**3.NF.3a**	understand what makes fractions equivalent.		
3. MD.7a	find the area by multiplying the side lengths.	**3.NF.3b**	recognize and form simple equivalent fractions.		
3.MD.7b	solve problems involving areas of rectangles.	**3.NF.3c**	express whole numbers as fractions.		
3.MD.7c	find the area of a rectangle by using the Distributive Property of Multiplication.	**3.NF.3d**	compare fractions that have the same numerator or the same denominator. I can justify the comparisons.		
3.MD.7d	find the area of a rectangular polygon by separating it into smaller rectangle and adding the areas.	**3.MD.1**	tell and write time to the nearest minute. I can solve time problems.		

Lebanon Borough Public School Instructional Unit

Content:	Mathematics			**Grade:**	3
Trimester:	1	**Unit Title:**	Operations, Place Value and Area	**Pacing:**	1

CRITICAL AREAS OF FOCUS FOR 3rd Grade

In grade 3, instructional time should focus on four critical areas:

1. Developing understanding of multiplication and division and strategies for multiplication and division within 100;
2. Developing understanding of fractions, especially unit fractions (fractions with numerator 1);
3. Developing understanding of the structure of rectangular arrays and of area; and
4. Describing and analyzing two-dimensional shapes. Students also work toward fluency in addition and subtraction within 1,00 division within 100. By the end of grade 3, students know all products of two one-digit numbers from memory.

1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involvi groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properti operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplicat and
division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multip
2. Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being build out of unit fr they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is re size of the whole. For example, ½ of the paint in a small bucket could be less paint than 1/3 of the paint in a large bucket, but 1/3 of a ribbon than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into able to use fractions to represent numbers equal to, less than, and greater than one. The solve problems that involve comparing fractions by models and strategies based on noticing equal numerators or denominators.
3. Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-si area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Stu understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectang arrays of squares, students connect area to multiplication and justify using multiplication to determine the area of a rectangle.
4. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a u fraction of the whole.

ESSENTIAL QUESTIONS

Why do I need mathematical operations?
What kinds of experiences help develop number sense?
How can I add, subtract and multiply?
How can I find area of a shape?

TARGET STANDARDS		
Math NJSLS	**I Can…**	**Mathematical Practice Standard**
3.NBT.1	Round a whole number to the nearest ten and nearest hundred.	MP.5, MP.7, MP.8
3.NBT.2	Use strategies for adding and subtracting within 1000	MP.2, MP.7, MP.8
3.OA.9	Identify and explain patterns	MP.1, MP.2, MP.3, MP.6, MP.7
3.OA.8	Use the four operations to solve two-step word problems where a variable is used to represent an unknown quantity. Use strategies to decide if my answer is reasonable.	MP.1, MP.2, MP.4, MP.5
3.OA.3	Multiply and divide to solve word problems.	MP.1, MP.4, MP.7
3.OA.5	Use the properties of multiplication and division to solve problems.	MP.1, MP.4, MP.7, MP.8
3.NBT.3	Use strategies to multiple one-digit number by multiples of ten.	MP.2, MP.7, MP.8
3.OA.7	Multiply and divide within 100.	MP.2, MP.7, MP.8
3.OA.1	Use multiplication to figure out the total number of objects in an array or equal groups.	MP.1, MP.4, MP.7
3.MD.5	Understand area.	MP.2, MP.4, MP.5, MP.6
3.MD.5a	Use square units to measure area.	MP.2, MP.4, MP.5, MP.6
3.MD.5b	Find area by using square units laid side by side without gaps or overlaps.	MP.2, MP.4, MP.5, MP.6
3.MD.6	Find areas by counting square units (customary and metric).	MP.2, MP.3, MP.5, MP.6
3.MD.7	Use multiplication and addition to solve for area.	MP.1, MP.2, MP.4, MP.5, MP.6
3. MD.7a	Find the area by multiplying the side lengths.	MP.1, MP.2, MP.4, MP.5, MP.6
3.MD.7b	Solve problems involving areas of rectangles.	MP.1, MP.2, MP.4, MP.5, MP.6
3.MD.7c	Find the area of a rectangle by using the Distributive Property of Multiplication.	MP.1, MP.2, MP.4, MP.5, MP.6
3.MD.7d	Find the area of a rectangular polygon by separating it into smaller rectangle and adding the areas.	MP.1, MP.2, MP.4, MP.5, MP.6

INSTRUCTIONAL PROGRESSION			
Weekly Plan	**Concept**	**GoMath! Connection**	**Vocabulary**
During Week 1	• Number: Representing Numbers • Number: Ways to Name Numbers • Number: Greater Numbers • Number: Understanding Number Lines/Counting on the Number Line • Number: Comparing Numbers	1-1, 1-2, 1-3, 1-4/1-5, 1-6	• digits • place value • standard form • expanded form • word form • period • compare
During Week 2	• Number: Ordering Numbers • Problem Solving: Making an Organized List • *Topic 1 Review and Assessment/Must include the Performance Task during instruction or assessment* • Number Sense: Addition Meanings and Properties	1-7, 1-8, Review, Assessment, 2-1	• order • addends • sum • Commutative (Order) Property of Addition • Associative (Grouping) Property of Addition • Identity (Zero) Propert of Addition
During Week 3	• Number Sense: Subtraction Meanings • Number Sense: Using Mental Math to Add • Number Sense: Using Mental Math to Subtract • Number Sense: Rounding, Estimating Sums and Differences	2-2, 2-3, 2-4, 2-5/ 2-6/2-7	• fact family • difference • round • estimate • compatible numbers
During Week 4	• Number Sense: Making Sense of Equations • Problem Solving: Reasonableness • *Topic 2 Review and Assessment/Must include the Performance Task during instruction or assessment* • Addition: Expanded Algorithms for Addition • Addition: Models for Adding 3-digit Numbers	2-8, 2-9, Review, Assessment, 3-1, 3-2	• equation • algorithms

During Week 5	• Addition: Adding 3 or More Numbers • Problem Solving: Draw a Picture • Subtraction: Expanded Algorithms for Subtraction, Models for and Subtracting 3-digit Numbers • Subtraction: Subtracting Across Zeros • *Topic 3 Review*	3-3/3-4, 3-5, 3-7/3-8, 3-9, Review	
During Week 6	• *Topic 3 Assessment/ Must include the Performance Task during instruction or assessment* • Number Sense: Multiplication as Repeated Addition • Number Sense: Arrays and Multiplication • Number Sense: Commutative Property • Number Sense: Writing Multiplication Number Stories	Assessment, 4-1, 4-2, 4-3, 4-4	• multiplication • factors • product • array • Commutative (Order) Property of Multiplication
During Week 7	• Number Sense: Writing to Explain • Multiplication: 2 and 5 as Factors • Multiplication: 9 as a Factor, Multiplying by Zero and One • Multiplication: Patterns for Facts • Multiplication: Ten as a Factor and Multiplying by Multiples of 10	4-5, 5-1, 5-2/5-3, 5-4, 5-5/5-6	• multiples • Identity (One) Property of Multiplication • Zero Property of Multiplication • multiply
During Week 8	• Problem Solving: Two-Question Problems • Multiplication: The Distributive Property • Multiplication: 3 and 4 as a Factor • Multiplication: 6, 7 and 8 as a Factor • Multiplication: Multiplying with 3 Factors	5-7, 6-1, 6-2/6-3, 6-4/6-5, 6-6	• Distributive Property • Associative (Grouping) Property of Multiplication

During Week 9	• Problem Solving: Multiple-Step Problems • *Topic 4, 5, 6 Review and Assessment/ Must include the Performance Task during instruction or assessment*	6-9, Review, Assessment	
During Week 10	• Measurement: Covering Regions • Measurement: Area and Units/Standard Units • Measurement: Area or Squares and Rectangles • Measurement: Area and the Distributive Property • Problem Solving: Solve a Simpler Problem	14-1, 14-2/14-3, 14-4, 14-5, 14-6	• area • square unit
During Week 11	• Measurement: Area of Irregular Shapes • Measurement: Equal Areas and Fractions • Problem Solving: Selecting Appropriate Measurement Units and Tools • *Topic 14 Review and Assessment/ Must include the Performance Task during instruction or assessment*	14-7, 14-9, 14-10, Review, Assessment	
During Week 12	• *Review and Reteach*	Review and Reteach	
During Week 13	• *Review, Trimester 1 Assessment*	Review, Trimester 1	

		Assessment	

Additional Resources

- ThinkCentral: www-k6.thinkcentral.com
- Illustrative Math: illustrativemath.org
- Khan Academy: www.khanacademy.org
- Learnzillion: learnzillion.com
- Xtra Math: xtramath.org
- Commoncoresheets.com
- Animated Math Models
  - iTools
  - Student Workbooks
  - Mega Math
  - Grab and Go Differentiated Center Kit

Special Notes:

You will notice that on some days, lessons are combined (example 1-4 and 1-5) because they may have covered the same conce whole math period for each lesson. However, if you find that your students need additional time, plan accordingly.

DIFFERENTIATION			
Special Education	**ELL**	**I&RS**	

• Provide modifications & accommodations as listed in the student's IEP • Position student near helping peer or have quick access to teacher • Modify or reduce assignments/tests • Reduce length of assignment for different mode of delivery • Increase one-to-one time • Utilize working contract between you and student at risk • Prioritize tasks • Provide manipulatives • Use graphic organizers • Use interactive math journals • Use online resources for skill building • Provide teacher notes • Use collaborative grouping strategies such small groups • Use GoMath! online resources • NJDOE resources	• Use GoMath! Spanish Resources • Provide text to speech for math problems • Use of translation dictionary or software • Implement strategy groups • Confer frequently • Provide graphic organizers • Modification plan • NJDOE resources • Adapt a Strategy-Adjusting strategies for ESL students: http://www.teachersfirst.com/con tent/esl/adaptstrat.cfm	• Tiered Interventions following I&RS framework • I&RS Intervention Bank • NJDOE resources • Math Lab • Utilize online resources such as www.tenmarks.com • k-5 intervention supports • Grab and Go and Teacher made games; Chapter Literature; Grab and Go Activity Cards	be modi skills, op discover • Utilize p greater • Utilize e to highe • Content abstract organiza • Product world pr deadline transfor • Learning modifie learning openne varied • Use of w as www. • extensi • NJDOE r

CROSS CURRICULUR RESOURCES
Literacy in Mathematics: http://www.readwritethink.org/search/?resource_type=6&q=math&sort_order=relevance
Grade 3-5 STEM resource: http://www.kineticcity.com/
K-12 STEM Educator and Career Resource: http://www.egfi-k12.org/

ALIGNMENT TO 21st CENTURY SKILLS AND TECHNOLOGY	
21st Century/ Interdisciplinary Themes: Bold all that apply	**21st Century Skills: Bold all that apply**
Global Awareness **Financial, Economic, Business and Entrepreneurial Literacy** Civic Literacy Health Literacy Environmental Literacy	Creativity & Innovation **Critical Thinking & Problem Solving** Communication & Collaboration Media Literacy Information Literacy **Information, Communication & Technology**

	Life & Career Skills

Technology Infusion

National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html
Math Resources for Technology
https://drive.google.com/file/d/0B4Zh_BcwMUEMOFRfSXZpdW9Yams/view?usp=sharing Smart Board Applications
GoMath! applications and online resources

Evidence of Student Learning

- Common benchmark
- Observation
- Evaluation rubrics
- Self-reflections
- Teacher-student conferences
- Performance Tasks
- Unit tests
- Quizzes

CRP Standards

CRP1. Act as a responsible and contributing citizen and employee.
CRP2. Apply appropriate academic and technical skills.
CRP3. Attend to personal health and financial well-being.
CRP4. Communicate clearly and effectively and with reason.
CRP5. Consider the environmental, social and economic impacts of decisions.
CRP6. Demonstrate creativity and innovation.
CRP7. Employ valid and reliable research strategies.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP9. Model integrity, ethical leadership and effective management.
CRP10. Plan education and career paths aligned to personal goals.
CRP11. Use technology to enhance productivity.
CRP12. Work productively in teams while using cultural global competence.

Lebanon Borough Public School Instructional Unit

Content:	Mathematics			**Grade:**	3
Trimester:	2	**Unit Title:**	Division, Fractions and Time	**Pacing:**	1

CRITICAL AREAS OF FOCUS FOR 3rd Grade

In grade 3, instructional time should focus on four critical areas:

1. Developing understanding of multiplication and division and strategies for multiplication and division within 100;
2. Developing understanding of fractions, especially unit fractions (fractions with numerator 1);
3. Developing understanding of the structure of rectangular arrays and of area; and
4. Describing and analyzing two-dimensional shapes. Students also work toward fluency in addition and subtraction within 1,00 division within 100. By the end of grade 3, students know all products of two one-digit numbers from memory.

1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involvi groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplicat and
division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multip
2. Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being build out of unit fr they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is re size of the whole. For example, ½ of the paint in a small bucket could be less paint than 1/3 of the paint in a large bucket, but 1/3 of a ribbon than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into able to use fractions to represent numbers equal to, less than, and greater than one. The solve problems that involve comparing fractions by models and strategies based on noticing equal numerators or denominators.
3. Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-si area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Stu understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectang arrays of squares, students connect area to multiplication and justify using multiplication to determine the area of a rectangle.
4. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a u fraction of the whole.

ESSENTIAL QUESTIONS

How can I divide?

How do I use fractions to identify parts of a whole? How can I use units of time?

TARGET STANDARDS		
Math NJSLS	**I Can…**	**Mathematical Practice Standard**
3.OA.2	Divide to show how to share a set of objects equally. I can use division to divide a set of objects into equal groups.	MP.1, MP.4, MP.7
3.OA.3	Multiply and divide to solve word problems.	MP.1, MP.4, MP.7
3.OA.4	Find a missing number in a multiplication of division problem.	MP.1, MP.2, MP.6, MP.7
3.OA.6	Use my understanding of multiplication to solve division problems.	MP.1, MP.7
3.OA.9	Identify and explain patterns.	MP.1, MP.2, MP.3, MP.6, MP.7
3.OA.8	Use the four operations to solve two-step word problems where a variable is used to represent an unknown quantity. I can use strategies to decide of my answer is reasonable.	MP.1, MP.2, MP.4, MP.5
3.OA.5	Use the properties of multiplication and division to solve problems.	MP.1, MP.4, MP.7, MP.8
3.OA.7	Multiply and divide within 100.	MP.2, MP.7, MP.8
3.NF.1	Recognize fractions as parts of a whole. I understand the difference between numerators and denominators.	MP.1, MP.4, MP.7, MP.8
3.NF.2	Understand that fractions can be represented on a number line.	MP.1, MP.4, MP.7, MP.8
3.NF.2a	Represent a fraction on a number line from 0 to 1.	MP.1, MP.4, MP.7, MP.8
3.NF.2b	Divide a number line into equal parts in order to represent a fraction on a number line.	MP.1, MP.4, MP.7, MP.8
3.NF.3d	Compare fractions that have the same numerator or the same denominator. I can justify the comparisons.	MP.1, MP.2, MP.3, MP.4, MP.6, MP.7, MP.8
3.NF.3a	Understand what makes fractions equivalent.	MP.1, MP.2, MP.3, MP.4, MP.6, MP.7, MP.8
3.NF.3b	Recognize and form simple equivalent fractions.	MP.1, MP.2, MP.3, MP.4, MP.6, MP.7, MP.8
3.NF.3c	Express whole numbers as fractions.	MP.1, MP.2, MP.3, MP.4, MP.6, MP.7, MP.8
3.NF.3	Compare fractions.	MP.1, MP.2, MP.3, MP.4, MP.6, MP.7, MP.8
3.MD.1	Tell and write time to nearest minute. Solve time problems.	MP.1, MP.4, MP.5, MP.6

INSTRUCTIONAL PROGRESSION			
Weekly Plan	**Concept**	**Go Math! Connection**	**Vocabulary**
During Week 1	Number Sense: Division as Sharing Number Sense: Division as Repeated Subtraction Problem Solving: Choose and Appropriate Equation Number Sense: Writing Division Number Stories Problem Solving: Use Objects and Draw a Picture	7-1, 7-2, 7-4, 7-5, 7-6	• division
During Week 2	Division: Relating Multiplication and Division Division: Fact Families 2 through 9 Problem Solving: Multi-step Problems Division: Dividing by 0 and 1 Problem Solving: Draw a Picture and Write a Number Sentence	8-1, 8-2/8-3, 8/4, 8-5, 8-7, 8-9	• dividend • divisor • quotient
During Week 3	• *Topic 7 and 8 Review and Assessment/ Must include the Performance Task during instruction or assessment*	Review and Assessment Winter Break beings	
During Week 4	Fractions: Dividing Regions into Equal Parts Fractions: Fractions and Regions Fractions: Fractions and Sets Fractions: Fractional Parts of a Set	9-1, 9-2, 9-3, 9-4 (2 days)	• halves • thirds • fourths • fifths • sixths • eighths • tenths • twelfths • fraction/unit fraction • numeration/denominator

During Week 5	Fractions: Locating Fractions on a Number Line Fractions: Benchmark Fractions Fractions: Fractions and Lengths Fractions: Using Models to Compare Fractions: Same Denominator	9-5 (2 days), 9-6, 9-7, 10-1	• mixed number • benchmark fraction
During Week 6	Fractions: Using Models to Compare Fractions: Same Numerator Fractions: Comparing Fractions Using Benchmarks Fractions: Comparing Fractions on a Number Line	10-2 (2 days), 10-3, 10-4	
During Week 7	Fractions: Comparing Fractions on a Number Line Fractions: Finding Equivalent Fractions Fractions: Equivalent Fractions and the Number Line Fractions: Whole Numbers and Fractions	10-4 cont., 10-5, 10-6, 10-7 (2 days)	• equivalent fractions • simplest form
During Week 8	Fraction: Using Fractions Problem Solving: Draw a Picture • *Topic 9 and 10 Review and Assessment/ Must include the Performance Task during instruction or assessment*	10-8, 10-9, Review and Assessment	
During Week 9	Measurement: Time to the Half Hour and Quarter Hour Measurement: Time to the Minute Measurement: Units of Time Measurement: Elapsed Time	12-1, 12-2, 12-3, 12-4 (2 days)	• hour • half hour • quarter hour • minute

			• seconds • A.M. • P.M. • elapsed time
During Week 10	• *Topic 12 Review and Assessment/ Must include the Performance Task during instruction or assessment*	Review and Assessment	
During Week 11 (NJSLA Flexible)	Review and Reteach	Review and Reteach	
During Week 12 (NJSLA Flexible)	Review, Trimester 2 Assessment	Review, Trimester 2 Assessment	

Additional Resources

- Illustrative Math: illustrativemath.org
- Khan Academy: www.khanacademy.org
- Learnzillion: learnzillion.com
- Xtra Math: xtramath.org
- Commoncoresheets.com
- BrainPop: brainpop.com

Special Notes:

You will notice that on some days, lessons are combined (example 1-4 and 1-5) because they may have covered the same conce
whole math period for each lesson. However, if you find that your students need additional time, plan accordingly.

DIFFERENTIATION

Special Education	ELL	I&RS	
• Provide modifications & accommodations as listed in the student's IEP • Position student near helping peer or have quick access to teacher • Modify or reduce assignments/tests • Reduce length of assignment for different mode of delivery • Increase one-to-one time • Utilize working contract between you and student at risk • Prioritize tasks • Provide manipulatives • Use graphic organizers • Use interactive math journals • Use online resources for skill building • Provide teacher notes • Use collaborative grouping strategies such small groups • Use Go Math! online resources • NJDOE resources	• Use Go Math!s Spanish Resources • Provide text to speech for math problems • Use of translation dictionary or software • Implement strategy groups • Confer frequently • Provide graphic organizers • Modification plan • NJDOE resources • Adapt a Strategy-Adjusting strategies for ESL students: http://www.teachersfirst.com/con tent/esl/adaptstrat.cfm	• Tiered Interventions following I&RS framework • I&RS Intervention Bank • NJDOE resources • Math Lab • Utilize online resources such as www.tenmarks.com • Go Math! k-5 intervention supports	• Proces order t thinkin • Utilize greate • Utilize higher • Conter abstra organi • Produc world deadli transfo • Learni modifi learnin openn varied • Use of www.t • Go Ma • NJDOE

CROSS CURRICULUR RESOURCES

Literacy in Mathematics: http://www.readwritethink.org/search/?resource_type=6&q=math&sort_order=relevance

Grade 3-5 STEM resource: http://www.kineticcity.com/

K-12 STEM Educator and Career Resource: http://www.egfi-k12.org/

ALIGNMENT TO 21st CENTURY SKILLS AND TECHNOLOGY	
21st Century/ Interdisciplinary Themes: Bold all that apply	**21st Century Skills: Bold all that apply**
Global Awareness **Financial, Economic, Business and Entrepreneurial Literacy** Civic Literacy Health Literacy Environmental Literacy	Creativity & Innovation **Critical Thinking & Problem Solving** Communication & Collaboration Media Literacy Information Literacy **Information, Communication & Technology Life & Career Skills**

Technology Infusion

National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html
Math Resources for Technology
https://drive.google.com/file/d/0B4Zh_BcwMUEMOFRfSXZpdW9Yams/view?usp=sharing Smart Board Applications
Go Math! applications and online resources

Evidence of Student Learning

- Common benchmark
- Observation
- Evaluation rubrics
- Self-reflections
- Teacher-student conferences
- Performance Tasks
- Unit tests
- Quizzes

CRP Standards

CRP1. Act as a responsible and contributing citizen and employee.
CRP2. Apply appropriate academic and technical skills.
CRP3. Attend to personal health and financial well-being.
CRP4. Communicate clearly and effectively and with reason.
CRP5. Consider the environmental, social and economic impacts of decisions.
CRP6. Demonstrate creativity and innovation.
CRP7. Employ valid and reliable research strategies.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP9. Model integrity, ethical leadership and effective management.
CRP10. Plan education and career paths aligned to personal goals.
CRP11. Use technology to enhance productivity.
CRP12. Work productively in teams while using cultural global competence.

Lebanon Borough Public School Instructional Unit

Content:	Mathematics			**Grade:**	3
Trimester:	3	**Unit Title:**	Perimeter, Geometry, Data and Liquid Volume and Mass	**Pacing:**	1

CRITICAL AREAS OF FOCUS FOR 3rd Grade

In grade 3, instructional time should focus on four critical areas:

1. Developing understanding of multiplication and division and strategies for multiplication and division within 100;
2. Developing understanding of fractions, especially unit fractions (fractions with numerator 1);
3. Developing understanding of the structure of rectangular arrays and of area; and
4. Describing and analyzing two-dimensional shapes. Students also work toward fluency in addition and subtraction within 1,00

division within 100. By the end of grade 3, students know all products of two one-digit numbers from memory.

1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involvi groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplicat and
division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multip
2. Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being build out of unit fr they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is re size of the whole. For example, ½ of the paint in a small bucket could be less paint than 1/3 of the paint in a large bucket, but 1/3 of a ribbon than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into able to use fractions to represent numbers equal to, less than, and greater than one. The solve problems that involve comparing fractions by models and strategies based on noticing equal numerators or denominators.
3. Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-si area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Stu understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectang arrays of squares, students connect area to multiplication and justify using multiplication to determine the area of a rectangle.
4. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a u fraction of the whole.

ESSENTIAL QUESTION

In what ways do units of measure help us to quantify the world around us?
How can you classify objects according to their attributes?
How do we measure?
How does examining data help us to organize and analyze events in our daily lives?

TARGET STANDARDS		
Math NJSLS	**I Can…**	**Mathematical Practice Standard**
3.MD.2	Measure volume and mass using customary and metric units. I can solve volume and mass problems.	MP.1, MP.2, MP.4, MP.5, MP.6
3.G.1	Understand that all shapes within a category share similar attributes. I can identify and describe shapes based on their attributes.	MP.2, MP.3, MP.5, MP.6
3.G.2	Divide shapes into equal parts, using fraction units to describe each part.	MP.2, MP.4, MP.5
3.MD.8	Solve for the perimeters of polygons when given various pieces of information.	MP.1, MP.2, MP.3, MP.4, MP.7
3.G.2	Divide shapes into equal parts, using unit fraction to describe each part.	MP.2, MP.4, MP.5
3.MD.4	Gather data on lengths of inches, half inches and quarter inches. I can show the data on a line plot.	MP.1, MP.4, MP.5, MP.6
3.MD.3	Create a scaled picture graph and a scaled bar graph with multiple categories. I can analyze graphs to solve problems.	MP.1, MP.4, MP.6, MP.7

INSTRUCTIONAL PROGRESSION			
Weekly Plan	**Concept**	**Go Math! Connection**	**Vocabulary**
During Week 1 (NJSLA Flexible)	Measurement: Customary Units of Capacity Measurement: Metric Units of Capacity Measurement: Units of Mass Measurement: Units of Weight Problem Solving: Draw a Picture	15-1, 15-2, 15-3, 15-4, 15-5	• capacity • cup • pint • quart • gallon • milliliter • liter • mass • gram (g) • kilogram (k) • weight • ounce • pound, ton

During Week 2 (NJSLA Flexible)	● *Topic 15 Review and Assessment/ Must include the Performance Task during instruction or assessment* Geometry: Lines and Line Segments Geometry: Angles Geometry: Polygons	Review and Assessment 11-1, 11-2, 11-3	● point ● line ● line segment* ● intersecting lines* ● parallel lines ● ray* ● angle ● vertex ● right angle ● acute angle* ● obtuse angle* ● polygon ● side ● diagonal* ● triangle ● quadrilateral ● pentagon ● hexagon ● octagon ● decagon
During Week 3	Geometry: Triangles Geometry: Quadrilaterals Geometry: Combining and Separating Shapes Geometry: Making New Shapes Problem Solving: Solve a Simpler Problem	11-4, 11-5, 11-6, 11-7, 11-8	● equilateral triangle ● isosceles triangle* ● scalene triangle* ● right triangle ● acute triangle* ● obtuse triangle* ● trapezoid ● parallelogram ● rectangle ● rhombus ● square * terms are outside the scope of g 3 standards
During Week 4	Problem Solving: Make and Test Generalizations ● *Topic 11 Review and Assessment/ Must include the Performance Task during instruction or assessment* Measurement: Understanding Perimeter	11-9, Review and Assessment, 13-1, 13-2	● perimeter ● mile

	Measurement: Tools and Units for Perimeter		
During Week 5	Measurement: Perimeter of Common Shapes Measurement: Different Shapes with the Same Perimeter Problem Solving: Try, Check, Revise ● *Topic 13 Review and Assessment Must include the Performance Task during instruction or assessment*	13-3, 13-4, 13-5, Review and Assessment	
During Week 6 (NJSLA Flexible)	Data: Line Plots Data: Length and Line Plots Data: Reading Pictographs and Bar Graphs Data: Making Pictographs Data: Making Bar Graphs	16-1, 16-2, 16-3, 16-4, 16-5	● line plot ● pictograph ● key ● bar graph ● scale
During Week 7 (NJSLA Flexible)	Problem Solving: Use Tables and Graphs to Draw Conclusions ● *Topic 16 Review and Assessment/ Must include the Performance Task during instruction or assessment* Review and Reteach	16-6, Review and Assessment Review and Reteach	
During Week 8 (NJSLA Flexible)	Review and Reteach	Review and Reteach	

During Week 9 (NJSLA Flexible)	Arrays and Multiplying by 10 and 100 Breaking Apart Arrays Using an Expanded Algorithm Multiplying 2-Digit by 1-Digit Numbers	Step-up to 4th Grade: Lessons 1, 2, 3 (2 days), 4	• array • expanded algorithm • product • digit • partial product
During Week 10	Using Models to Divide Dividing 2-Digit by 1-Digit Numbers Factors	Step-up to 4th Grade: Lessons 5 (2 days), 6, 7	• remainders • compare • factors

During Week 11	Modeling Addition of Fractions Modeling Subtraction of Fractions Fractions and Decimals	Step-up to 4th Grade: Lessons 7 cont., 8, 9, 10 (2 days)	• numera • denominator • common denominator • represent • decimal • tenths • hundredths • thousandths • equivalent
During Week 12	Review and Reteach	Review and Reteach	

During Week 13	Review and Trimester 3 Assessment	Review and Trimester 3 Assessment	

Additional Resources

- Pearson Successnet: www.pearsonsuccessnet.com
- Illustrative Math: illustrativemath.org
- Khan Academy: www.khanacademy.org
- Learnzillion: learnzillion.com
- Commoncoresheets.com
- StudyIsland.com

Special Notes:

You will notice that on some days, lessons are combined (example 1-4 and 1-5) because they may have covered the same conce whole math period for each lesson. However, if you find that your students need additional time, plan accordingly. Topic 14 inc seem to fall in Grade 4 Geometry standards. However, they are included in the Grade 3 lessons as they can be used to classify sh included here to err on the side of caution.

DIFFERENTIATION			
Special Education	**ELL**	**I&RS**	
• Provide modifications & accommodations as listed in the student's IEP • Position student near helping peer or have quick access to teacher • Modify or reduce assignments/tests • Reduce length of assignment for different mode of delivery • Increase one-to-one time • Utilize working contract between you and student at risk • Prioritize tasks • Provide manipulatives • Use graphic organizers • Use interactive math journals • Use online resources for skill building • Provide teacher notes • Use collaborative grouping strategies such small groups • Use Go Math!s online resources • NJDOE resources	• Use Go Math!s Spanish Resources • Provide text to speech for math problems • Use of translation dictionary or software • Implement strategy groups • Confer frequently • Provide graphic organizers • Modification plan • NJDOE resources • Adapt a Strategy-Adjusting strategies for ESL students: http://www.teachersfirst.com/con tent/esl/adaptstrat.cfm	• Tiered Interventions following I&RS framework • I&RS Intervention Bank • NJDOE resources • Math Lab • Utilize online resources such as www.tenmarks.com • Go Math! k-5 intervention supports	• Process order th thinking • Utilize p greater • Utilize e to highe • Content abstract organiza • Product world pr deadline transfor • Learning modifie learning openne varied • Use of w as www • Go Matl • NJDOE r

CROSS CURRICULUR RESOURCES
Literacy in Mathematics: http://www.readwritethink.org/search/?resource_type=6&q=math&sort_order=relevance
Grade 3-5 STEM resource: http://www.kineticcity.com/
K-12 STEM Educator and Career Resource: http://www.egfi-k12.org/

ALIGNMENT TO 21st CENTURY SKILLS AND TECHNOLOGY	
21st Century/ Interdisciplinary Themes: Bold all that apply	**21st Century Skills: Bold all that apply**
Global Awareness **Financial, Economic, Business and Entrepreneurial Literacy** Civic Literacy Health Literacy Environmental Literacy	Creativity & Innovation **Critical Thinking & Problem Solving** Communication & Collaboration Media Literacy Information Literacy **Information, Communication & Technology**

	Life & Career Skills

Technology Infusion

National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html
Math Resources for Technology
https://drive.google.com/file/d/0B4Zh_BcwMUEMOFRfSXZpdW9Yams/view?usp=sharing Smart Board Applications
Go Math! applications and online resources

Evidence of Student Learning

- Common benchmark
- Observation
- Evaluation rubrics
- Self-reflections
- Teacher-student conferences
- Performance Tasks
- Unit tests
- Quizzes

CRP Standards

CRP1. Act as a responsible and contributing citizen and employee.
CRP2. Apply appropriate academic and technical skills.
CRP3. Attend to personal health and financial well-being.
CRP4. Communicate clearly and effectively and with reason.
CRP5. Consider the environmental, social and economic impacts of decisions.
CRP6. Demonstrate creativity and innovation.
CRP7. Employ valid and reliable research strategies.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP9. Model integrity, ethical leadership and effective management.
CRP10. Plan education and career paths aligned to personal goals.
CRP11. Use technology to enhance productivity.
CRP12. Work productively in teams while using cultural global competence.