

Lebanon Borough Public School

Mathematics

Curriculum Guide

Second 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)*

Second Grade Math at a Glance

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
MATH	MATH	MATH
Focus: Understanding Addition and Subtraction	Focus: Addition and Subtraction within 1,000	Focus: Money Word Problems
Focus: Mental Addition and Subtraction to 100	Focus: Place Value within 1,000	Focus: Measurement
Focus: Place Value to 100	Focus: Identifying Coins	Focus: Geometry
Focus: Introduction to Time	Focus: Counting Money	Focus: Time / Data and Graphs
		Focus: Step-Up to Third Grade

Trimester Priority Standards

TRIMESTER 1		TRIMESTER 2		TRIMESTER 3	
NJSLS	By the end of Trimester 1, students can:	NJSLS	By the end of Trimester 2, students can:	NJSLS	By the end of Trimester 3, students can:
2.OA.2	I can fluently add and subtract within 20.	2.OA.1	I can solve addition and subtraction word problems within 100.	2.OA.4	I can use repeated addition to figure out how many objects are in rows and columns.
2.OA.3	I can tell if a number is odd or even.	2.NBT.3	I can read and write numbers in many ways to 1,000.	2.MD.1	I can use tools to measure length.
2.NBT.1	I know that three-digit numbers are made up of hundreds, tens, and ones.	2.NBT.5	I can fluently add and subtract within 100.	2.MD.2	I can measure the length of an object using two different units.
2.NBT.1a	I know that 100 is ten tens.	2.NBT.6	I can add up to four two-digit numbers.	2.MD.3	I can estimate lengths.
2.NBT.1b	I know that there are 1-9 hundreds in the numbers 100-900.	2.NBT.7	I can add and subtract within 1,000 using many strategies.	2.MD.4	I can measure to figure out how much longer one object is than another.
2.NBT.2	I can count by 5s, 10s, and 100s within 1,000.	2.NBT.9	I can explain how addition and subtraction work.	2.MD.5	I can use addition and subtraction within 100 to solve measurement word problems.
2.NBT.3	I can read and write numbers in many ways to 100 .	2.MD.6	I can represent whole numbers as lengths on a number line.	2.MD.7	I can tell time to the nearest five minutes.
2.NBT.4	I can compare two-three-digit numbers.	2.MD.8	I can identify and count coins.	2.MD.8	I can solve money word problems.
2.NBT.7	I can add and subtract within 100 using many strategies without regrouping.			2.MD.9	I can display and analyze measurement data.
2.NBT.8	I can mentally add or subtract 10 or 100 to or from a number 100-900.			2.MD.10	I can show data on a picture graph and a bar graph. I can analyze data in a bar graph.
2.MD.7	I can tell and write time to the nearest five minutes.			2.G.1	I can recognize and draw shapes based on attributes.
				2.G.2	I can divide rectangles into rows and columns of same-size squares.
				2.G.3	I can divide circles and rectangles into two, three, and four equal parts and name those parts.

Lebanon Borough Public School Instructional Unit

Content:	Mathematics	Grade:	2
Trimester:	1	Unit Title:	Understanding and Applying Place Value, Mathematical Operations, and Time
		Pacing:	September-December

CRITICAL AREAS OF FOCUS FOR 2nd Grade

In grade 2, instructional time should focus on four critical areas:

1. Extending understanding of base-ten notation
 2. Building fluency with addition and subtraction,
 3. Using standard units of measure
 4. Describing and analyzing shapes.
1. Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).
 2. Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.
 3. Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.
 4. Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

ESSENTIAL QUESTIONS

1. What are some ways to think about addition and subtraction?
2. How can numbers to 100 be shown and compared?
3. How can numbers within 100 be added and subtracted?

TARGET STANDARDS

Math NJSL	I Can...	Mathematical Practice Standard	Benchmark Assessment (Place and X or N/A)
2.OA.2	Fluently add and subtract within 20.	MP 8- Look for and express regularity in repeated reasoning.	X
2.OA.3	Tell if a number is odd or even.	MP 3- Construct viable arguments and critique the reasoning of others.	X

2.NBT.1a	I know that 100 is ten tens.	MP 1 – Make sense of problems and persevere in solving them.	N/A
2.NBT.1b	I know that there are 1-9 hundreds in the numbers 100-900.	MP 8- Look for and express regularity in repeated reasoning.	X
2.NBT.2	Count 5s, 10s, and 100s within 1,000.	MP 7- Look for and make use of structure.	X
2.NBT.3	Read and write numbers in many ways to 100 .	MP 2 -Reason abstractly and quantitatively.	X
2.NBT.4	Compare two three-digit numbers.	MP 2- Reason abstractly and quantitatively.	X
2.NBT.7	Add and subtract within 100 using many strategies without regrouping.	MP 4- Model with mathematics.	N/A
2.NBT.8	Mentally add or subtract 10 or 100 to or from a number 100-900.	MP 6- Attend to precision.	N/A
2.MD.7	Tell and write time to the nearest five minutes.	MP 5- Use appropriate tools strategically.	N/A
INSTRUCTIONAL PROGRESSION			
Weekly Plan	Concept	GoMath! Connection	Evidence of
<i>During Week 1</i>	Placement Test / Understanding Addition and Subtraction	Placement Test (Pre-Assessment), Begin Topic 1	<ul style="list-style-type: none"> Part Whole Equals Plus Sum Placement Test Data
<i>During Week 2</i>	Understanding Addition and Subtraction	Finish Topic 1	Optional Topic 1 Assessment
<i>During Week 3</i>	Addition Strategies	Topics 2-1, 2-2, 2-3, 2-4, 2-5	<ul style="list-style-type: none"> Doubles Addend Sum Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 4</i>	Addition Strategies	Topics 2-6, 2-7, Review,	<ul style="list-style-type: none"> Number Sentence Optional Unit 2 Assessment
<i>During Week 5</i>	Subtraction Strategies	Topics 3-1, 3-2, 3-3, 3-4, 3-5	<ul style="list-style-type: none"> Difference Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 6</i>	Subtraction Strategies	Topic 3-6, Review, Assess	Optional Topic 3 Assessment
<i>During Week 7</i>	Place Value Within 100	Topics 5-1, 5-2, 5-3, 5-4	<ul style="list-style-type: none"> Digits Number Word Greater Than, Less Than, Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,

			<ul style="list-style-type: none"> • Equal To • Before & After 	
<i>During Week 8</i>	Place Value Within 100	Topics 5-5, 5-6, 5-7, Review, Assess	<ul style="list-style-type: none"> • Even & Odd 	Optional Topic 5 Assessment
<i>During Week 9</i>	Mental Addition	Topics 6-1, 6-2, 6-3	<ul style="list-style-type: none"> • Mental Math • Tens Digit • Next Ten • Hundred Chart 	Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 10</i>	Mental Addition	Topics 6-4, 6-5, 6-6, Review, Assess		Optional Topic 6 Assessment
<i>During Week 11</i>	Mental Subtraction	Topics 7-1, 7-2, 7-3, 7-4, 7-5		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 12</i>	Mental Subtraction / Time	Review, Assess, review First Grade Concepts (Supplement Materials for Time to half-hour and hour)		Optional Topic 7 Assessment
<i>During Week 13</i>	Time	Topic 16-1. Topic 16-2 will be taught in Trimester 3. Supplement Material for Time to Five Minutes.	<ul style="list-style-type: none"> • Minute Hand • Minute • Hour Hand • Hour • Half Hour • A.M. • P.M. 	Trimester 1 Unit Assessment

Additional Resources

Digital component of GoMath! materials

Khan Academy: <https://www.khanacademy.org/commoncore>

Study Island: <https://app.studyisland.com/cfw/login>

Illustrative Math: <http://www.illustrativemathematics.org/>

Special Notes:

Please do not teach Topic 16-2 during Trimester 1. It will be taught during Trimester 3.

Topic 4 (Working with Equal Groups) will be taught during Trimester 3.

Use topic tests in Assessment Sourcebook at your discretion.

Use at least 1 Performance task in Instruction and 1 in Assessment during the Trimester.

DIFFERENTIATION

Special Education	ELL	I&RS	Enrichment
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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/content/esl/adaptstrat.cfm 	<ul style="list-style-type: none"> • Tiered Interventions following I&RS framework • I&RS Intervention Bank • NJDOE resources • Math Lab • Utilize online resources such as www.tenmarks.com 	<ul style="list-style-type: none"> • Process should be modified: higher order thinking skills, open-ended thinking, discovery • Utilize project-based learning for greater depth of knowledge • Utilize exploratory connections to higher grade concepts • Contents should be modified: abstraction, complexity, variety, organization • Products should be modified: real world problems, audiences, deadlines, evaluation, transformations • Learning environment should be modified: student-centered learning, independence, openness, complexity, groups varied • Use of web based resources such as www.tenmarks.com • GoMath! extension activities • NJDOE resources

CROSS CURRICULAR 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**

Global Awareness
Financial, Economic, Business and Entrepreneurial Literacy
 Civic Literacy
 Health Literacy
 Environmental Literacy

21st Century Skills: **Bold all that apply**

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 Study Island -<https://app.studyisland.com/cfw/login>

Evidence of Student Learning

- Common benchmark
- Observation
- Evaluation rubrics
- Self-reflections
- Teacher-student conferences
- Running records
- 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:	2		
Trimester:	2	Unit Title:	Numbers and Operations to 1,000	Pacing:	December - March

-CRITICAL AREAS OF FOCUS FOR 2nd Grade

In grade 2, instructional time should focus on four critical areas:

1. Extending understanding of base-ten notation
 2. Building fluency with addition and subtraction,
 3. Using standard units of measure
 4. Describing and analyzing shapes.
1. Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).
 2. Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.
 3. Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.
 4. Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

ESSENTIAL QUESTIONS

1. What number patterns are helpful in reading and writing numbers to 1,000?
2. What are the standard procedures for adding and subtracting two-digit numbers?
3. What are the ways to add and subtract three-digit numbers?
4. What strategies can be used to count money?

TARGET STANDARDS				
Math NJSLS	I Can...	Mathematical Practice Standard		Benchmark Assessment (Place and X or N/A)
2.OA.1	Solve addition and subtraction word problems within 100.	MP.1: Make sense of problems and persevere in solving them.		X
2.NBT.3	Read and write numbers in many ways to 1,000.	MP.2: Reason abstractly and quantitatively.		X
2.NBT.5	Fluently add and subtract within 100.	MP.7: Look for and make use of structure.		X
2.NBT.6	Add up to four two-digit numbers.	MP.8: Look for and express regularity in repeated reasoning. (Inductive Reasoning)		N/A
2.NBT.7	Add and subtract within 1,000 using many strategies.	MP.2: Reason abstractly and quantitatively.		X
2.NBT.9	Explain how addition and subtraction work.	MP.6: Attend to precision.		X
2.MD.6	Represent whole numbers as lengths on a number line.	MP.5: Use appropriate tools strategically.		X
2.MD.8	Identify and count coins.	MP 1: Make sense of problems and persevere in solving them.		X
INSTRUCTIONAL PROGRESSION				
Weekly Plan	Concept	GoMath! Connection	Vocabulary	Evidence of Learning
<i>During Week 1</i>	Adding Two-Digit Numbers	8.1, 8.2, 8.3, 8.4, 8.5	<ul style="list-style-type: none"> Regroup 	Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 2</i>	Adding Two-Digit Numbers	8.6, 8.7, 8.8., 8.9, Review & Assess	<ul style="list-style-type: none"> Number Line 	Optional Assessment
<i>During Week 3</i>	Reteach Week (Two-Day Week)	Supplement Materials		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 4</i>	Subtracting Two-Digit Numbers	9.1, 9.2, 9.3, 9.4, 9.5		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,

<i>During Week 5</i>	Subtracting Two-Digit Numbers	9.6, 9.7, 9.8, 9.9, Review & Assess		Optional Assessment
<i>During Week 6</i>	Place Value to 1,000	10.1, 10.2, 10.3, 10.4	<ul style="list-style-type: none"> • Hundreds • Thousands • Expanded Form • Standard Form • Number Word 	Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 7</i>	Place Value Within 1,000	10.5, 10.6, 10.7, 10.8, Review & Assess	<ul style="list-style-type: none"> • Compare 	Optional Assessment
<i>During Week 8</i>	Adding Three-Digit Numbers	11.1, 11.2, 11.3, 11.4, 11.5		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 9</i>	Adding & Subtracting Three-Digit Numbers	11.6, 11.7, 11.8, 11.9, 11.10		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 10</i>	Subtracting Three-Digit Numbers & Identifying and Counting Coins	11.11, Review & Assess Supplement		Optional Assessment
<i>During Week 11</i>	Identifying and Counting Coins	Supplement Materials		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 12</i>	Counting Money *Half-Dollar and Dollar coin not in standards - Teach at Discretion	13.1, 13.2, 13.3, 13.4, 13.5	<ul style="list-style-type: none"> • Penny • Nickel • Dime • Quarter • Dollar 	Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 13</i>	Counting Money	Review & Assess,		Assessment

		Supplement Materials		
Additional Resources				
<p>Digital component of GoMath! materials.</p> <p>Khan Academy: https://www.khanacademy.org/commoncore</p> <p>Study Island: https://app.studyisland.com/cfw/login</p> <p>Illustrative Math: http://www.illustrativemathematics.org/</p>				
Special Notes:				
<p>Topic 12 (Geometry) will be taught in Trimester 3.</p> <p>Use topic tests and Assessment sourcebook at your discretion.</p> <p>Use at least 1 Performance task in Instruction and 1 in Assessment during the Trimester.</p>				

DIFFERENTIATION			
Special Education	ELL	I&RS	Enrichment
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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/content/esl/adaptstrat.cfm 	<ul style="list-style-type: none"> • Tiered Interventions following I&RS framework • I&RS Intervention Bank • NJDOE resources • Math Lab • Utilize online resources such as www.tenmarks.com • GoMath! k-5 intervention supports 	<ul style="list-style-type: none"> • Process should be modified: higher order thinking skills, open-ended thinking, discovery • Utilize project-based learning for greater depth of knowledge • Utilize exploratory connections to higher grade concepts • Contents should be modified: abstraction, complexity, variety, organization • Products should be modified: real world problems, audiences, deadlines, evaluation, transformations • Learning environment should be modified: student-centered learning, independence, openness, complexity, groups varied • Use of web based resources such as www.tenmarks.com • GoMath! extension activities • NJDOE resources
CROSS CURRICULUR RESOURCES			
Literacy in Mathematics: http://www.readwritethink.org/search/?resource_type=6&q=math&sort_order=relevance			
Grade 3-5 Enrichment resource: http://www.kineticcity.com/			
K-12 STEM Educator and Career Resource: http://www.egfi-k12.org/			
ALIGNMENT TO 21 st CENTURY SKILLS AND TECHNOLOGY			
21 st Century/ Interdisciplinary Themes: Bold all that apply		21 st 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
- Running records
- 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:	2		
Trimester:	3	Unit Title:	Measurement and Geometry	Pacing:	March-June

CRITICAL AREAS OF FOCUS FOR 2nd Grade

In grade 2, instructional time should focus on four critical areas:

1. Extending understanding of base-ten notation
 2. Building fluency with addition and subtraction,
 3. Using standard units of measure
 4. Describing and analyzing shapes.
1. Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).
 2. Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.
 3. Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.
 4. Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

ESSENTIAL QUESTIONS

1. What is the process for measuring length?
2. How can shapes be described and compared?
3. How can clocks, bar graphs, and pictographs be used to show data and answer questions?
4. What is the relationship between arrays and repeated addition?

TARGET STANDARDS

Math NJSLs	I Can...	Mathematical Practice Standard	Benchmark Assessment (Place and X or N/A)
2.OA.4	Use repeated addition to figure out how many objects are in rows and columns.	MP 8: Look for and express regularity in repeated reasoning.	X
2.NBT.6	Add up to four two-digit numbers.	MP 2: Reason abstractly and quantitatively.	X
2.MD.1	Use tools to measure length.	MP 5: Use appropriate tools strategically.	X
2.MD.2	Measure the length of an object using two different units.	MP 6: Attend to precision.	X
2.MD.3	Estimate lengths.	MP 2: Reason abstractly and quantitatively.	X
2.MD.4	Measure to figure out how much longer one object is than another.	MP 2: Reason abstractly and quantitatively.	X
2.MD.5	Use addition and subtraction within 100 to solve measurement word problems.	MP 1: Make sense of problems and persevere in solving them.	X
2.MD.7	Tell time to the nearest five minutes.	MP 5: Use appropriate tools strategically.	X
2.MD.8	Solve money word problems.	MP 1: Make sense of problems and persevere in solving them.	X
2.MD.9	Display and analyze measurement data.	MP 4: Model with mathematics.	N/A
2.MD.10	Show data on a picture graph and a bar graph. I can analyze data on a bar graph.	MP 8: Look for and express regularity in repeated reasoning.	X
2.G.1	Recognize and draw shapes based on attributes.	MP 7: Look for and make use of structure.	X
2.G.2	Divide rectangles into rows and columns of same-size squares.	MP 2: Reason abstractly and quantitatively.	X
2.G.3	Divide circles and rectangles into two, three, and four equal parts and name those parts.	MP 6: Attend to precision.	X
Science & Engineering	I Can...	Mathematical Practice Standard	Benchmark Assessment (Place and X or N/A)
4.1	Represent data in tables and/or various graphical displays (bar graphs, pictographs, and/or pie charts) to reveal patterns that indicate relationships.	4.2: Analyze and interpret data to make sense of phenomena, using logical reasoning and/or computation.	X

INSTRUCTIONAL PROGRESSION

Weekly Plan	Concept	GoMath! Connection	Vocabulary	Evidence of Learning
<i>During Week 1</i>	Adding and Subtracting Money	Topics 14-1, 14-2, (14-3 at Teacher Discretion), 14-4, Review, Assess	<ul style="list-style-type: none"> • Total • Amount 	Optional topic 14 Assessment
<i>During Week 2</i>	Solving Money Word Problems	Supplement Materials		Options: Problem of the Day, GoMath!

				Quick Checks,
<i>During Week 3</i>	Measurement	Topics 15-1, 15-2, 15-3, 15-4, 15-5	<ul style="list-style-type: none"> • Unit • Length • Inch • Width • Height • Nearest Inch • Centimeter • Nearest Centimeter • Foot • Yard • Meter 	Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 4</i>	Measurement	Topics 15-6, 15-7, 15-8, 15-9, Assess		Optional Assessment
<i>During Week 5</i>	Geometry Topics 12-1 and 12-2 move beyond the scope of the standards. Teach at your discretion.	Supplement Materials for identifying shapes, Topic 12-3, 12-4, 12-5 Teach 12-1, 12-2 at your discretion.	<ul style="list-style-type: none"> • Triangle • Cube • Angle • Side • Quadrilateral • Pentagon • Hexagon • Equal & Unequal • Halves • Thirds • Fourths • Rows • Columns 	Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 6</i>	Geometry	Topics 12-6, 12-7, Review, Assess		Optional Assessment
<i>During Week 7</i>	Time / Data and Graphs	Supplement Materials for time, Topics 16-2, 16-3, 16-4, 16-5	<ul style="list-style-type: none"> • Quarter Past / after • Half past / after • Quarter to / of 	Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 8</i>	Data and Graphs	Topic 16-6, 16-7, Review, Assess		Optional Assessment
<i>During</i>	Working with Equal Groups	Topics 4-1, 4-2,		Optional

<i>Week 9</i>		4-3, 4-4-, Assess		Assessment
<i>During Week 10</i>	Second Grade Review Week: All Concepts. Preparing for 3 rd grade.	Supplement Materials, GoMath! Step-Up		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 11</i>	Second Grade Review Week: All Concepts. Preparing for 3 rd grade.	Supplement Materials, GoMath! Step-Up		Options: Problem of the Day, Exit Slips, GoMath! Quick Checks,
<i>During Week 12</i>	Review and Unit Assessment	Supplement Materials		Unit Assessment

Additional Resources

Digital component of GoMath! materials.

Khan Academy: <https://www.khanacademy.org/commoncore>

Study Island: <http://app.studyisland.com/cfw/login>

Illustrative Math: <http://www.illustrativemathematics.org/>

Special Notes:

The following lessons move beyond the scope of the standards. Teach at your discretion.

12-1

12-2

The only 3d shape that students are responsible for learning in second grade (according to Standard 2.G.1) is a cube. Pyramids, cylinders, spheres, cones, and rectangular prisms are all included in lessons 12-1 and 12-2.

Use topic tests and Assessment sourcebook at your discretion.

Use at least 1 Performance task in Instruction and 1 in Assessment during the Trimester.

DIFFERENTIATION			
Special Education	ELL	I&RS	Enrichment
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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/content/esl/adaptstrat.cfm 	<ul style="list-style-type: none"> • Tiered Interventions following I&RS framework • RtI Intervention Bank • NJDOE resources • Math Lab • Utilize online resources such as www.tenmarks.com • GoMath! k-5 intervention supports 	<ul style="list-style-type: none"> • Process should be modified: higher order thinking skills, open-ended thinking, discovery • Utilize project-based learning for greater depth of knowledge • Utilize exploratory connections to higher grade concepts • Contents should be modified: abstraction, complexity, variety, organization • Products should be modified: real world problems, audiences, deadlines, evaluation, transformations • Learning environment should be modified: student-centered learning, independence, openness, complexity, groups varied • Use of web based resources such as www.tenmarks.com • GoMath! extension activities • NJDOE resources
CROSS CURRICULAR 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 21 st CENTURY SKILLS AND TECHNOLOGY			
21 st Century/ Interdisciplinary Themes: Bold all that apply		21 st 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_BcwMUEMOFrSfSXZpdW9Yams/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
- Running records
- 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.

