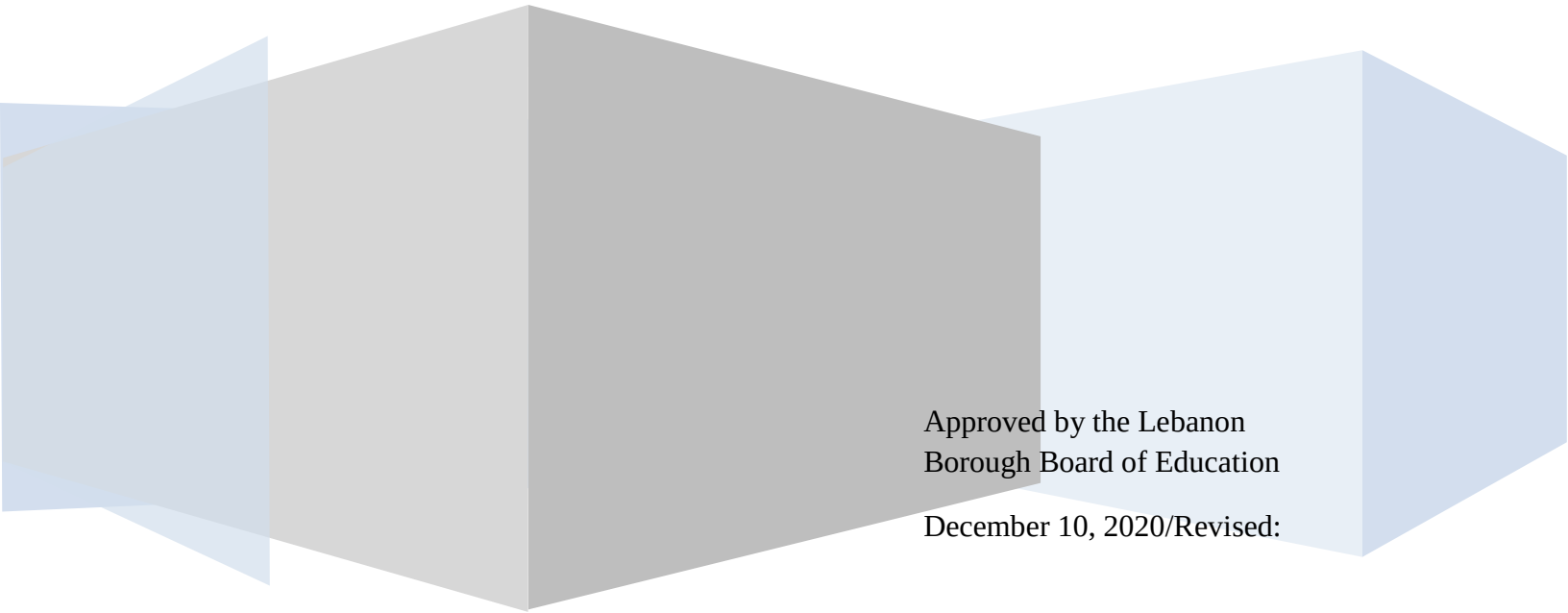
Lebanon Borough Public School

Mathematics

Curriculum Guide

First 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)*

First Grade Math At A Glance

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
MATH	**MATH**	**MATH**
Focus: Represent and solve problems involving addition and subtraction within 12, including missing addends (addition only).	Focus: Represent and solve problems involving addition and subtraction within 20, including missing addends (addition and subtraction within 10).	Focus: Represent and solve problems involving addition and subtraction within 20, including missing addends in all positions (addition and subtraction within 20).
Focus: Demonstrate fluency for addition within 12.	Focus: Demonstrate fluency for addition (within 20) and subtraction (within 10). Use a variety of strategies to add and subtract within 20.	Focus: Demonstrate fluency for addition and subtraction within 20.
Focus: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 12.	Focus: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.	Focus: Measure lengths indirectly and by iterating length units.
Focus: Extend the counting sequence to 120.		Focus: Tell and write time in hours and half-hours using analog and digital clocks.
	Focus: Understand place value. Use place value understanding and properties of operations to add and subtract.	Focus: Represent and interpret data.
	Focus: Work with addition and subtraction equations to determine if equations are true or false.	Focus: Reason with shapes and their attributes.

First 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:**
1.NBT.A.1	I can count from any number to 120.			**1.OA.C.6**	I can add and subtract fluently within 20.
1.NBT.A.1	I can read and write numbers up to 120.	**1.OA.A.2**	I can solve word problems by adding three numbers whose sum is less than or equal to 20.	**1.OA.D.8**	I can figure out a missing number in an addition or subtraction equation within 20, in all positions.
1.OA.C.5	I can count on to add. I can count back to subtract.	**1.OA.C.6**	I can fluently add within 20.	**1.MD.B.3**	I can tell and write time to the hour and half hour.
1.OA.C.6	I can fluently add within 12.	**1.OA.C.6**	I can fluently subtract within 10.	**1.MD.B.3**	I can tell and write time using analog and digital clocks.
1.OA.C.6	I can use mental strategies to add and subtract within 12.	**1.OA.C.6**	I can use mental strategies to add and subtract within 20.	**1.MD.C.4**	I can organize data into three groups or less.
1.OA.A.1	I can solve addition and subtraction word problems within 12.	**1.OA.A.1**	I can solve addition and subtraction word problems within 20.	**1.MD.C.4**	I can ask and answer questions about data.
1.OA.D.8	I can figure out a missing number in an addition equation.	**1.OA.D.8**	I can figure out a missing number in an addition or subtraction equation within 10.	**1.MD.A.1**	I can put objects in order by length.
1.OA.B.4	I can use addition facts to solve subtraction problems.	**1.OA.A.2**	I can solve word problems by adding three numbers whose sum is less than or equal to 20.	**1.MD.A.1**	I can use one object to compare the lengths of two other objects.
1.OA.B.3	I can use strategies to make it easier to add and subtract.	**1.OA.D.7**	I can figure out if an equation is true or false.	**1.MD.A.2**	I can measure objects with nonstandard units.
		1.OA.B.4	I can use addition facts to solve subtraction problems.	**1.G.A.1**	I know the difference between attributes that define a shape and attributes that describe a shape.
		1.OA.B.3	I can use strategies to make it easier to add and subtract.	**1.G.A.1**	I can build and draw shapes with certain attributes.
		1.NBT.B.2	I understand that two-digit numbers contain tens and ones.	**1.G.A.2**	I can build two-dimensional and three-dimensional figures from other

					figures.
		1.NBT.B.2a	I know that 10 is ten ones, or a ten.	**1.G.A.3**	I can divide circles and rectangles into two or four equal parts.
		1.NBT.B.2b	I know that the numbers 11-19 have a ten and some ones.	**1.G.A.3**	I can name the smaller parts.
		1.NBT.B.2c	I can tell how many tens and ones are in the multiples of ten.		
		1.NBT.B.3	I can compare two 2-digit numbers.		
		1.NBT.C.5	I can explain how to find 10 more or 10 less than a two-digit number.		
		1.NBT.C.4	I can add a 2-digit number to a 1-digit or 2-digit number (multiple of 10) within 100.		
		1.NBT.C.6	I can explain how to subtract multiples of 10 from other multiples of 10 up to 90.		

Lebanon Borough Public School Instructional Unit

Content:	Mathematics			**Grade:**	1
Trimester:	1	**Unit 1**	Numeration	**Pacing:**	2 weeks

CRITICAL AREAS OF FOCUS FOR 1st Grade

In grade 1, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. Developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. Developing understanding of linear measurement and measuring lengths as iterating length units; and
4. Reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
2. Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.
3. Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.
4. Students compose and decompose plane or solid figures to build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

ESSENTIAL QUESTION

How is counting with numbers greater than 100 similar to counting with smaller numbers?

TARGET STANDARDS

Math NJSLS	I Can...	Mathematical Practice Standard	Benchmark Assessment (Place an X or N/A)
1.NBT.A.1	Count from any number to 120.	MP.2, MP.7, MP.8.	N/A
1.NBT.A.1	Read and write numbers up to 120.	MP.2, MP.7, MP.8	X

INSTRUCTIONAL PROGRESSION

Mathematics

Weekly Plan	Concept	Go Math Connection	Vocabulary	Evidence of Learning
During Week 1	Orally count numbers to 120.	Supplemental	One-hundred, number chart	Teacher Observation
During Week 2	Read and write numbers to 120.	Lesson 7-4; Readiness from Topic 1	Digit, row, column, number chart	Completing a number chart, filling in missing numbers

Additional Resources

Number charts
Pearsonrealize.com
http://www.kidport.com/Grade1/Math/NumberSense/G1-M-NS1-1-1.htm
http://www.kidport.com/Grade1/Math/NumberSense/G1-M-NS-Sequencing.htm

Special Notes:

Use Topic Tests in Assessment Sourcebook at your discretion.
Use at least 1 Performance Task in your instruction in Trimester 1.

DIFFERENTIATION			
Special Education	**ELL**	**I&RS**	**ENRICH**
• 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 Go Math 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	• 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 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 • Go Math 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 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
- 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:**	1
Trimester:	1	**Unit 2**	Understanding Addition	**Pacing:**	5 weeks

CRITICAL AREAS OF FOCUS FOR 1st Grade

In grade 1, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. Developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. Developing understanding of linear measurement and measuring lengths as iterating length units; and
4. Reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
2. Students develop, discuss, and use efficient, accurate, and generalized methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.
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ESSENTIAL QUESTION

What does it mean to add?

Mathematics

TARGET STANDARDS	
I Can...	**Mathematical Practice Standard**
Count on to add.	MP.2, MP.7, MP.8
Fluently add within 12.	MP.2, MP.7, MP.8
Use mental strategies to add within 12.	MP.2, MP.7, MP.8
Solve addition word problems within 12.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.8
Figure out a missing number in an addition equation.	MP.2, MP.6, MP.8
Use strategies to make it easier to add and subtract.	MP.2, MP.7, MP.8

INSTRUCTIONAL PROGRESSION		
Concept	**Go Math Connection**	**Vocabulary**
Explore making parts for the sums of numbers to 12.	Topic 1 (1-1, 1-2, 1-3, 1-4)	In all, part, whole, double
Introduction to number sentences.	Begin with 1-5	Plus, add, sum, addition sentence, equals, join, order, addend
Ten-frames and missing parts to 10.	Topic 3	Ten-frame, whole, missing part
Addition Strategies	Topic 4 (4-1, 4-2, 4-3, 4-4, 4-5)	Double, near doubles, counting on

Additional Resources
Go Math's Basic-Facts Timed Tests Pearsonrealize.com http://thinkfinity.org http://www.kidport.com Xtramath.org

Special Notes:
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DIFFERENTIATION			
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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**

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- Evaluation rubrics
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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:**	1
Trimester:	1	**Unit 3**	Understanding Subtraction	**Pacing:**	4 weeks

CRITICAL AREAS OF FOCUS FOR 1st Grade

In grade 1, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. Developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. Developing understanding of linear measurement and measuring lengths as iterating length units; and
4. Reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
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ESSENTIAL QUESTION

What does it mean to subtract?

TARGET STANDARDS

Mathematics

Math NJSLS	I Can...	Mathematical Practice Standard	Benchmark Assessment (Place an X or N/A)
1.OA.C.5	Count back to subtract.	MP.2, MP.7, MP.8	N/A
1.OA.C.6	Use mental strategies to subtract within 12.	MP.2, MP.7, MP.8	N/A
1.OA.A.1	Solve subtraction word problems within 12.	MP.1, MP.2, MP.3, MP. 4, MP.5, MP.6, MP.8	X
1.OA.B.4	Use addition facts to solve subtraction problems.	MP.2, MP.7, MP.8	X
1.OA.B.3	Use strategies to make it easier to add and subtract.	MP.2, MP.7, MP.8	X

INSTRUCTIONAL PROGRESSION

Weekly Plan	Concept	Go Math Connection	Vocabulary	Evidence of Learning
During Week 8	Finding Missing Parts and Number Sentences	Topic 2 (2-1, 2-2, 2-3, 2-4)	Missing part, whole, subtract, difference, subtraction sentence, minus sign, equal sign	Quick Check Masters; Exit Slips
During Week 9	Subtraction Concepts	Topic 2 (2-5, 2-6, 2-7)	Take away, compare, missing part, whole	Problem of the Day; Exit Slips
During Week 10	Connecting Addition and Subtraction with different strategies	Topic 2-8, 2-9, 2-11, Topic Test	Same amount	Problem of the Day; Exit Slips
During Week 11	Subtracting 0, 1, and 2; Connecting addition and subtraction	Topic 4-6, 4-7, 4-8, 4-9, 4-10	Less than	Quick Check Masters; Topic Test 4
During Week 12	Reteach Week			
During Week 13	Reteach Week			

Additional Resources

Daily Common Core Review Pages
Pearsonrealize.com
http://thinkfinity.org
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Smart Board Applications
Go Math applications and online resources

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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:	1
Trimester:	2	Unit 1	Subtraction within 20	Pacing:	5 weeks

CRITICAL AREAS OF FOCUS FOR 1st Grade

In grade 1, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. Developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. Developing understanding of linear measurement and measuring lengths as iterating length units; and
4. Reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
2. Students develop, discuss, and use efficient, accurate, and generalized methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.
3. Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.
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ESSENTIAL QUESTION

What other strategies can be used to find subtraction facts?

TARGET STANDARDS

Math NJSLS	I Can...	Mathematical Practice Standard	Benchmark

Mathematics

			Assessment (Place an X or N/A)
1.OA.C.6	Use mental strategies to add and subtract within 20.	MP.2, MP.7, MP.8	N/A
1.OA.C.6	Fluently add and subtract within 10.	MP.2, MP.7, MP.8	N/A
1.OA.A.1	Solve addition and subtraction word problems within 20.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.8	X
1.OA .D.8	Figure out a missing number in an addition or subtraction equation.	MP.2, MP. 6, MP.8	X
1.OA.B.3	Use strategies to make it easier to add and subtract.	MP.2, MP.7, MP.8	N/A
1.OA.B.4	Use addition facts to solve subtraction problems.	MP.2, MP.7, MP.8	X
1.OA.A.2	Solve word problems by adding three numbers whose sum is less than or equal to 20.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.7, MP.8	X

INSTRUCTIONAL PROGRESSION

Weekly Plan	Concept	Go Math Connection	Vocabulary	Evidence of Learning
During Week 1	Addition Strategies using Doubles	Topic 5 (5-1, 5-2, 5-3)	Doubles, Doubles plus 1, Doubles plus two	Quick Check Masters
During Week 2	Making 10	Topic 5 (5-5, 5-6, 5-7)		Teacher observations; Exit slips
During Week 3	Adding three numbers	Topic 5 (5-8, 5-9)		Problem of the Day; Topic 5 Test
During Week 4	Making 10 to subtract, Related facts, and Fact families	Topic 6	Related facts, fact family	Fact Triangles, Exit slips, Quick Check Masters
During Week 5	Subtraction facts (fluency)	Topic 6 (6-6, 6-7)		Quick Check Masters; Basic-Facts Timed Tests

Additional Resources

Go Math Basic-Facts Timed Tests
Carson-Dellosa Center-SOLUTIONS for the Common Core Task Cards
Daily Common Core Review Pages
pearsonrealize.com
http://thinkfinity.org
http://www.kidport.com
Xtramath.org

Special Notes:

Use Topic Tests in Assessment Sourcebook at your discretion.
Use at least 1 Performance Task in your instruction or as an assessment in Trimester 2.

DIFFERENTIATION

Special Education

- 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 Maths online resources
- NJDOE resources

ELL

- Use Go Maths 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

I&RS

- 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

ENRICH

- 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
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Mathematics

CROSS CURRICULUR RESOURCES
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Grade 3-5 STEM resource: http://www.kineticcity.com/
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ALIGNMENT TO 21st CENTURY SKILLS AND TECHNOLOGY	
21st Century/ Interdisciplinary Themes: Bold all that apply	**21st Century Skills: Bold all that apply**
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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.
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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:**	1
Trimester:	2	**Unit 2**	Number and Operations in Base Ten	**Pacing:**	9 Weeks

CRITICAL AREAS OF FOCUS FOR 1st Grade

In grade 1, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. Developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. Developing understanding of linear measurement and measuring lengths as iterating length units; and
4. Reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
2. Students develop, discuss, and use efficient, accurate, and generalized methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.
3. Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.
4. Students compose and decompose plane or solid figures to build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

ESSENTIAL QUESTION

What number patterns are there when counting to 120?
How can numbers 10 and higher be shown, counted, read, and written?

TARGET STANDARDS

Mathematics

Math NJSLS	I Can…	Mathematical Practice Standard	Benchmark Assessment (Place an X or N/A)
1.NBT. B.2	Understand that two-digit numbers contain tens and ones.	MP.1, MP.4, MP.5	X
1.NBT.B.2a	Know that 10 is ten ones, or a ten.	MP.1, MP.2, MP.5	N/A
1.NBT.B.2b	Know that the numbers 11-19 have a ten and some ones.		X
1.NBT.B.2c	Tell how many tens and ones are the multiples of ten.	MP.1, MP.3, MP.7	X
1.NBT.C.5	Explain how to find ten more or 10 less than a two digit number.	MP.1, MP.2, MP.6	X
1.NBT.C.4	Add a 2-digit number to a 1-digit or 2-digit number (multiple of 10) within 100.	MP.1, MP.5, MP.6, MP.7	X
1.NBT.B3	Compare two 2-digit numbers.	MP.2, MP.3, MP.5, MP.8	X
1.NBT.C.6	Explain how to subtract multiples of 10 from other multiples of 10 up to 90.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.7, MP.8	N/A

INSTRUCTIONAL PROGRESSION

Weekly Plan	Concept	Go Math Connection	Vocabulary	Evidence of Learning
During Week 6	Counting and Number Patterns to 120	7-1, 7-2, 7-3, 7-4, 7-6		Quick Check Masters, Number Grid Puzzles, Teacher observation
During Week 7	Place Value, Tens and Ones	8-1, 8-2, 8-3	Tens, ones, digit	Quick Check Masters, Teacher observation
During Week 8	Place Value, Tens and Ones	8-4, 8-5	Break apart a ten	Quick Check Masters; Exit slips; Topic 8 Test
During Week 9	Comparing Numbers to 100	9-1, 9-2, 9-3, 9-4	1 more, 1 less, 10 more, 10 less, greater than (>), less than (<), equal to (=)	Exit slips; Problem of the day
During Week 10	Comparing Numbers to 100, Problem Solving	9-5		Quick Check Masters; Topic 9 Test; Problem of the Day
During Week 11	Adding with Tens and Ones	10-1, 10-2, 10-3, 10-4, 10-5	Regroup	Quick Check Masters; Problem of the day; Exit Slips
During Week 12	Adding with Tens and Ones	10-5, 10-6	Regroup	Quick Check Masters; Exit slips; Problem of the Day

During Week 13	Subtracting with Tens and Ones	11-1, 11-2, 11-3, 11-4, 11-5, Topic Test		Quick Check Masters; Topic 11 Test; Exit Slips

Additional Resources

Base-10 Blocks
Number Grid Puzzles
Carson-Dellosa Center-SOLUTIONS for the Common Core Task Cards
Daily Common Core Review Pages
pearsonrealize.com
http://thinkfinity.org
http://www.kidport.com

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DIFFERENTIATION

Special Education

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Mathematics

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CRP12. Work productively in teams while using cultural global competence.

Lebanon Borough Public School Instructional Unit

Content:	Mathematics			**Grade:**	1
Trimester:	3	**Unit 1**	Measurement by Length	**Pacing:**	1 week

CRITICAL AREAS OF FOCUS FOR 1st Grade

In grade 1, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. Developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. Developing understanding of linear measurement and measuring lengths as iterating length units; and
4. Reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
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ESSENTIAL QUESTION

How can objects be measured, compared, and ordered by length?

TARGET STANDARDS

Math	I Can...	Mathematical Practice Standard	Benchmark

NJSLS			Assessment (Place an X or N/A)
1.MD.A.1	Use one object to compare the lengths of two other objects.	MP.1, MP.2, MP.3, MP.5, MP.6	X
1.MD.A.1	Put objects in order by length.	MP.1, MP.2, MP.3, MP.5, MP.6	X
1.MD.A.2	Measure objects with nonstandard units.	MP.2, MP.4, MP.5, MP.6, MP.7, MP.8	X

INSTRUCTIONAL PROGRESSION

Weekly Plan	Concept	Go Math Connection	Vocabulary	Evidence of Learning
During Week 1	Measure lengths indirectly and by iterating length units.	Topic 12	Longest, shortest, taller, shorter, estimate, measure	Quick Check Masters; Problem of the Day; Teacher observation

Additional Resources

Carson-Dellosa Center-SOLUTIONS for the Common Core Task Cards
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pearsonrealize.com
http://thinkfinity.org
http://www.kidport.com

Special Notes:

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Use at least 1 Performance Task as an assessment in Trimester 3.

DIFFERENTIATION			
Special Education	**ELL**	**I&RS**	**ENRICH**
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Smart Board Applications
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CRP Standards

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CRP12. Work productively in teams while using cultural global competence.

Lebanon Borough Public School Instructional Unit

Content:	Mathematics			**Grade:**	1
Trimester:	3	**Unit 2**	Time	**Pacing:**	1 Week

CRITICAL AREAS OF FOCUS FOR 1st Grade

In grade 1, instructional time should focus on four critical areas:

1. Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. Developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. Developing understanding of linear measurement and measuring lengths as iterating length units; and
4. Reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
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ESSENTIAL QUESTION

How can clocks and schedules be read and used?

TARGET STANDARDS

Math NJSLS	I Can...	Mathematical Practice Standard	Benchmark Assessment (Place an X or N/A)
1.MD.B.3	Tell and write time to the hour and half hour.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.7, MP.8	X
1.MD.B.3	Tell and write time using analog and digital clocks.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.7, MP.8	X

INSTRUCTIONAL PROGRESSION				
Weekly Plan	**Concept**	**Go Math Connection**	**Vocabulary**	**Evidence of Learning**
During Week 2	Telling time using analog and digital clocks, to the hour and half hour.	Topic 13	Hour hand, hour, minute hand, minute, o'clock, half hour, schedule, analog clock, digital clock	Teacher observation; Quick Check Masters; Topic 13 Test

Additional Resources

Student clocks, demonstration clock
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Lebanon Borough Public School Instructional Unit

Content:	Mathematics			**Grade:**	1
Trimester:	3	**Unit 3**	Using Data to Answer Questions	**Pacing:**	2 weeks

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1. Students develop strategies for adding and subtracting whole numbers. They use a variety of methods, including discrete objects, to model add-on, take from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
2. Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.
3. Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.
4. Students compose and decompose plane or solid figures to build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

ESSENTIAL QUESTION

How can graphs be used to show data and answer questions?

TARGET STANDARDS

Math NJSLS	I Can...	Mathematical Practice Standard	Benchmark Assessment (Place an X or N/A)
1.MD.C.4	Organize data into three groups or less.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.7	N/A
1.MD.C.4	Ask and answer questions about data.	MP.1, MP.2, MP.3, MP.4, MP.5, MP.6, MP.7	X

INSTRUCTIONAL PROGRESSION

Mathematics

Weekly Plan	Concept	Go Math Connection	Vocabulary	Evidence of Learning
During Week 3	Represent and interpret data.	Topic 14-1, 14-2, 14-3, 14-4	Picture graph, bar graph, tally mark, data, graph	Teacher observation; Quick Check Masters; Problem of the Day
During Week 4	Represent and interpret data.	Topic 14-5, 14-6, 14-7		Teacher observation; Quick Check Masters; Problem of the Day; Topic 14 Test

Additional Resources

Post-it notes
Graph paper
Carson-Dellosa Center-SOLUTIONS for the Common Core Task Cards
Daily Common Core Review Pages
pearsonrealize.com
http://thinkfinity.org
http://www.kidport.com

Special Notes:

Use Topic Tests in Assessment Sourcebook at your discretion.
Use at least 1 Performance Task as an assessment in Trimester 3.

DIFFERENTIATION			
Special Education	**ELL**	**I&RS**	**ENRICH**
• 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 Maths online resources • NJDOE resources	• Use Go Maths 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	• 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 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 • Go Math 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 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
- 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.