Kenilworth Public Schools

Curriculum Guide

Content Area: Math
Grade: 2
BOE Approved: 8/13/12

Revision Date: Fall 2018
Submitted by: Cynthia Donough
BOE Revision Approved: 11/12/18

Mathematics- Grade 2 Scope and Sequence

Unit 1- Number Sense and Place Value	Unit 2- Addition and Subtraction	Unit 3- Money and Time (Time portion of this unit will be taught between chapter 4 and 5 in Unit 2)	Unit 4- Measuring Length	Unit 5- Graphs/Data	Unit 6- Geometry	Unit 7 Bridging the Gap
Weeks 1-6	Weeks 7-19	Weeks 20-23	Weeks 24-29	Weeks 30-32	Weeks 33-36	Weeks 37-38
Unit Description: Extend understanding of base-ten notation.	*Unit Description:* Build fluency with addition and subtraction up to 3 digit numbers.	*Unit Description:* Use standard units of measure to tell and write time and make amounts with currency.	*Unit Description:* Use standard units of measure to determine length.	*Unit Description:* Represent and interpret data.	*Unit Description:* Reason with shapes and their attributes.	*Unit Description:* Build on Grade 2 content and prepare for Grade 3 content.
Unit Targets: • Identify odd and even numbers. • Identify doubles and that the sum of doubles is always an even number. • Represent, identify, and write 3 digit numbers. • Count by 2s, 5s, 10s, and 3s. • Read and write numbers to 1000 and in expanded	*Unit Targets:* • Fluently add and subtract to 20. • Solve word problems with adding and subtracting to 100. • Solve two step word problems to 100. • Introduce arrays to 5 X 5. • Add and subtract 2 digit numbers with borrowing and	*Unit Targets:* • Tell time to the hour and half hour. • Tell time to 5 minute intervals. • Identify am and pm. • Identify penny, nickel, dime, quarter, and half dollar. • Count mixed coins including the half-dollar. • Identify one dollar and represent in a	*Unit Targets:* • Measure using inches, centimeters, feet, and meters. • Measure using rulers, yardsticks, and measuring tape. • Estimate size. • Add and subtract in word problems with measurement and money. • Compare the measurement of	*Unit Targets:* • Use line plot and coordinate grids. • Create, read, and interpret a graph with up to 4 categories. • Read and interpret horizontal and vertical bar graphs.	*Unit Targets:* • Identify congruency. • Identify non-unit fractions. • Identify and describe equal parts as ½, 1/3, and ¼. • Identify and sort two-dimensional shapes based on attributes. • Identify and sort three-dimensional shapes based on	*Unit Targets:* • Apply place value concepts to represent and to compare numbers. • Develop fluency with addition and subtraction. • Measure lengths • Apply concepts of two-dimensional shapes. • Find sums on an addition table. • Estimate sums of 2

form. • Identify 3 digit numbers with the symbols for greater than and less than.	carrying by modeling and in written form. • Add and subtract 3 digit numbers.	variety of ways.	objects. • Calculate perimeter. • Introduce area.		attributes.	digit and 3 digit numbers.

Mathematics- Grade 2 Unit One

Unit Title: Number Sense and Place Value

Unit Summary: Students will extend their understanding of base-ten notation.

Primary interdisciplinary connections: Reading -NJSLSA.R1, Writing -NJSLSA.W1, Speaking and Listening- NJSLSA.SL1

21st Century Themes: CRP8, CRP11

Learning Targets

NJSLS Standards: 2.OA.3, 2.NBT.1-8

Technology Standards: 8.1 Educational Technology – ISTE.7

Content Statements:

1	Understand place value
2	Use place value understanding and properties of operations to add and subtract.

Big Idea: Developing a sense of numbers and place value results in the ability to manipulate and interact with numbers.

Unit Essential Questions:	**Unit Enduring Understandings:**
• How is place value used to understand numbers?	• It is through understanding place value that numbers can be written, described, and used.

Unit Learning Targets

Students will…

- Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  - a. 100 can be thought of as a bundle of ten tens — called a “hundred.”
  - b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
  - Count within 1000; skip-count by 5s, 10s, and 100s.
  - Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
  - Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons
  - Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
  - Add up to four two-digit numbers using strategies based on place value and properties of

operations.

- Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
- Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

Evidence of Learning

Summative Assessment: Chapter 1 and 2 tests from Go Math series

Formative Assessments:

- Conduct the "Show What You Know" assessment prior to each chapter.
- Administer the Performance Task at the end of each chapter.
- Complete Review Project online Books for Sale upon completion of the unit.

Lesson Plans

Activities	*Timeframe*
• Children complete "We Show Seashells" on orange Activity Card 14 by determining if a set has an even or odd number. *Coordinates with Lesson 1.1* • Children read the book <u>The Roadside Stand</u> and see vegetables arranged in rows of tens and ones. *Coordinates with Lesson 1.3* • Children practice naming numbers in different ways by playing the game "Four in a Row". *Children Lesson 1.6* • Take a nature walk around the school to collect leaves with each child collecting at least 10 leaves. Pose the question of how the class can find how many leaves were collected in all. Children work in small groups to plan and carry out a way to count the leaves, such as fives, tens, or twos. • Children complete "Out to Dry" on orange Activity 18 by using place value to model and order 3-digit numbers. *Coordinates with Lesson 2.3* • Children read the book <u>Dave and Boots</u> and learn about place value. *Coordinates with Lesson 2.1* • Children practice identifying the place value of digits in 3-digit numbers by playing the game "Fish for Digits!"	One day for each activity Weeks 1-6

Coordinates with Lesson 2.2

- As an extension of the plant science unit, discuss the giant sequoia trees and how they grow very tall. Children research different trees and how tall they get. Children write the 3-digit numbers and tell the value of each digit. Children can order the size of the trees.

Ongoing activities

- Math Journal
- Math fact practice (Xtramath.com)

The following Mathematical Practices are to be included in math activities:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Teacher Resources	*Teacher Note*
• Go Math Teacher Resources • Math Board • Unifix cubes • Counting tape • Base-ten blocks • Math Journal • Drill exercises	Math journal questions, modified tests/quizzes, and addition facts practice sheets can be found in the Second Grade Supplemental Activities binder.

Differentiating Instruction: Students with Disabilities, English Language Learners, and Gifted & Talented Students

Examples of Strategies and Practices that Support Students with Disabilities:

- Use of visual and multisensory formats
- Use of assisted technology
- Use of prompts
- Modification of content and student products
- Testing accommodations
- Authentic assessments

Examples of Strategies and Practices that Support Gifted & Talented Students:
• Adjusting the pace of lessons
• Curriculum compacting
• Inquiry-based instruction
• Independent study
• Higher-order thinking skills
• Interest-based content
• Student-driven instruction
• Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:
• Pre-teaching of vocabulary and concepts
• Visual learning, including graphic organizers
• Use of cognates to increase comprehension
• Teacher modeling
• Pairing students with beginning English language skills with students who have more advanced English language skills
• Scaffolding
•Word walls
•Sentence frames
•Think-pair-share
•Cooperative learning groups

Mathematics- Grade 2 Unit Two

Unit Title: Addition and Subtraction

Unit Summary: Students will build fluency with addition and subtraction up to 3-digit numbers.

Primary Interdisciplinary Connections: Reading -NJSLSA.R1, Writing -NJSLSA.W1, Speaking and Listening- NJSLSA.SL1.

21st Century Career and Life Themes: CRP8, CRP11

Learning Targets

NJSLS Standards: 2.OA.1-4, NBT.5-9

Technology Standards: 8.1 Educational Technology – ISTE.7

Content Statements:

1	Use place value understanding and properties of operations to add and subtract.

Big Idea: The relationship between addition and subtraction and an understanding of place value enables one to solve computation problems.

Unit Essential Questions:

- How are addition problems solved?
- How are subtraction problems solved?
- How can addition and subtraction of two-digit numbers be represented?
- How can addition and subtraction of three-digit numbers be represented?

Unit Enduring Understandings:

- Through using strategies such as using doubles and making a ten, various adding sentences with sums inclusive of 20 can be solved.
- Through using strategies such as using a number line and knowledge of addition facts, various subtraction sentences with differences inclusive of 20 can be solved.
- Through such strategies as modeling, making ten, using a hundred chart, and others addition and subtraction of two-digit numbers can be represented.
- Through such strategies as drawing quick pictures, making models, and others addition and subtraction of two-digit numbers can be represented.

Unit Learning Targets

Students will…

- Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions,
- Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know

from memory all sums of two one-digit numbers.

- Determine whether a group of objects (up to 20) has an odd or even number of members,
- Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
- Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Add up to four two-digit numbers using strategies based on place value and properties of operations.
- Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
- Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
- Explain why addition and subtraction strategies work, using place value and the properties of operations.

Evidence of Learning

Summative Assessment: Chapter 3, 4, 5, and 6 tests from Go Math series

Formative Assessments:

- Conduct the "Show What You Know" assessment prior to each chapter.
- Administer the Performance Task at the end of each chapter.
- Complete Review Project online Plan a Trip to the Zoo upon completion of the unit.

Lesson Plans

Activities	*Timeframe*
• Children complete "Ring Toss" on orange Activity Card 1 by adding numbers to 18. *Coordinates with Lesson 3.4* • Children read the book Doubles Fun on the Farm and add equal groups to make doubles. *Coordinates with Lesson 3.11* • Children practice basic addition facts by playing the game Caterpillar Chase. *Coordinates with Lesson 3.2* • Give each small group of children between 10 and 15 small rocks. Sort the rocks based on common characteristics. Have the children make adding sentences with three addends to add the amount of rocks in the different groups.	One day for each activity Weeks 7-19

• Children complete "Marbleous" on blue Activity Card 9 by reviewing 2-digit addition with regrouping. *Coordinates with Lesson 4.8* • Children read the book Nature's Numbers and add various objects and animals as they read. *Coordinates with Lesson 4.1* • Children add 2-digit numbers by playing the game Soccer Sums. *Coordinates with Lesson 4.6* • Explain how motion is when objects move and how that objects do not move on their own need people to push them. Children work in pairs. Children push a car from a starting point record, and then the other child pushes the car again. Children use cubes and record the addition sentence to determine how far the car moved in all. • Children complete "Super Subtraction" on orange Activity Card 13 by solving subtraction problems. *Coordinates with Lesson 5.5* • Children read the book Comic Books for Sale and model 2-digit subtraction. *Coordinates with Lesson 5.7* • Children make and solve 2-digit subtraction problems with counters by playing the game Subtraction Action. *Coordinates with Lesson 5.8* • Children pick places where they would like to go on vacation and research what the temperature would be there. Children use subtraction to compare the normal temperatures of the destination cities. • Children complete "Hundreds" on blue Activity Card 16 by modeling addition of 100s. *Coordinates with Lesson 6.1* • Children read the book The Bug Boys and learn about subtracting with 3-digit numbers. *Coordinates with Lesson 6.6* • Children practice subtraction with 3-digit numbers by playing the game Around the World. *Coordinates with Lesson 6.9* • Tell children that all living things need food to live and different animals need different amounts of food. Have children research different animals including an elephant and create word problems that total the amount of food that the animal consumed in a week. Ongoing activities • Math Journal	

• Math fact practice (Xtramath.com) The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	
Teacher Resources	*Teacher Note*
• Go Math! Teacher resources • Math Boards • Counting tape • Two-color counters • Base ten blocks • Math Journal • Drill exercises	Math journal questions, modified tests/quizzes, and addition facts practice sheets can be found in the Second Grade Supplemental Activities binder.

Differentiating Instruction: Students with Disabilities, English Language Learners, and Gifted & Talented Students

Examples of Strategies and Practices that Support Students with Disabilities:
• Use of visual and multisensory formats
• Use of assisted technology
• Use of prompts
• Modification of content and student products
• Testing accommodations
• Authentic assessments

Examples of Strategies and Practices that Support Gifted & Talented Students:
• Adjusting the pace of lessons
• Curriculum compacting
• Inquiry-based instruction
• Independent study
• Higher-order thinking skills
• Interest-based content
• Student-driven instruction

• Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:
• Pre-teaching of vocabulary and concepts
• Visual learning, including graphic organizers
• Use of cognates to increase comprehension
• Teacher modeling
• Pairing students with beginning English language skills with students who have more advanced English language skills
• Scaffolding
•Word walls
•Sentence frames
•Think-pair-share
•Cooperative learning groups

Mathematics- Grade 2 Unit Three

Unit Title: Money and Time

Unit Summary: Students use standard units of measure to tell time and write time. Students will use standard units of measure to make amounts with currency.

Primary Interdisciplinary Connections: Reading -NJSLSA.R1, Writing -NJSLSA.W1, Speaking and Listening- NJSLSA.SL1.

21st Century Career and Life Themes: CRP8, CRP11

Learning Targets

NJSLS Standards: 2.MD.7-8

Technology Standards: 8.1 Educational Technology – ISTE.7

Content Statements:

1	Work with time and money.

Big Idea: Understanding how to measure time and money is an essential skill for life.

Unit Essential Questions:	**Unit Enduring Understandings:**
• How is time measured? • How is the total value of a group of money determined?	• Using various clocks in different settings, time is measured in minutes and hours. • Through identification of coins and assigning values to those coins, groups of coins can be counted.

Unit Learning Targets
Students will…

- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

Evidence of Learning

Summative Assessment: Chapter 7 test from Go Math series

Formative Assessments:

- Conduct the "Show What You Know" assessment prior to each chapter.
- Administer the Performance Task at the end of the chapter.

Lesson Plans

Activities	*Timeframe*
• Children complete "Piggly Wiggly" on orange Activity Card 6 by comparing values of different coins. *Coordinates with Lesson 7.4* • Children read the book Time to Go Shopping to count coins to buy items. *Coordinates with Lesson 7.7* • Children practice showing the same amount of money in various ways by playing the game "Tic Tac Total". *Coordinates Lesson 7.6* • Children complete "Time for School" on orange Activity Card 8 by reading and showing time on an analog clock. *Coordinates with Lesson 7.8* • Children read the book All the Time to tell time to the hour and half hour. *Coordinates with Lesson 7.9* • Children practice telling time to the hour and half hour without the minute hand by playing the game Just in Time! *Coordinates with Lesson 7.10* • Set up classroom store. Establish hours for operation and products to sell. Assign prices to the items and act out selling products using play coins. • ** Identify a half-dollar coin and combinations of coins that have the same value as a half-dollar. • **Count collections of coins including a half-dollar, quarter, dimes, nickels, and pennies. Ongoing activities • Math Journal • Math fact practice (Xtramath.com) The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	One day for each activity Weeks 20-23
Teacher Resources	*Teacher Note*
• Go Math! Teacher resources	** These are objectives only for topics that need to be addressed not

• Math Board • Coins • Counting Tape • Math Journal • Drill exercises	found in the Go Math! Series. Please use these objectives as guidelines in creating lessons for these objectives. Math journal questions, modified tests/quizzes, and addition facts practice sheets can be found in the Second Grade Supplemental Activities binder.

Differentiating Instruction: Students with Disabilities, English Language Learners, and Gifted & Talented Students

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Examples of Strategies and Practices that Support Gifted & Talented Students:
• Adjusting the pace of lessons
• Curriculum compacting
• Inquiry-based instruction
• Independent study
• Higher-order thinking skills
• Interest-based content
• Student-driven instruction
• Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:
• Pre-teaching of vocabulary and concepts
• Visual learning, including graphic organizers
• Use of cognates to increase comprehension
• Teacher modeling
• Pairing students with beginning English language skills with students who have more advanced English language skills
• Scaffolding
•Word walls
•Sentence frames
•Think-pair-share
•Cooperative learning groups

Mathematics- Grade 2 Unit Four

Unit Title: Measuring Length	
Unit Summary: Students use standard units of measure to determine length.	
Primary Interdisciplinary Connections: Reading -NJSLSA.R1, Writing -NJSLSA.W1, Speaking and Listening- NJSLSA.SL1.	
21st Century Career and Life Themes: CRP8, CRP11	
Learning Targets	
NJSLS Standards: 2.MD.1-9	
Technology Standards: 8.1 Educational Technology – ISTE.7	
Content Statements:	
1	Measure and estimate lengths in standard units
2	Relate addition and subtraction to length
3	Represent and interpret data
Big Idea: Measuring lengths of objects provides a means for interacting with the world.	
Unit Essential Questions: • How are objects measured?	**Unit Enduring Understandings:** • There are different units of measure such as inches, centimeters, and feet to measure an object's length.

Unit Learning Targets
Students will…

- Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- Estimate lengths using units of inches, feet, centimeters, and meters.
- Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
- Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
- Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m.

and p.m.

- Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.
- Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
- Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems4 using information presented in a bar graph.

Evidence of Learning

Summative Assessment: Chapter 8 and 9 tests from Go Math series

Formative Assessments:

- Conduct the "Show What You Know" assessment prior to each chapter.
- Administer the Performance Task at the end of the chapter.

Lesson Plans

Activities	*Timeframe*
• Children complete "Super Subs" on orange Activity Card 17 by comparing the lengths of everyday objects using non-standard unit of measure. *Coordinates with Lesson 8.1* • Children read the book Nature Walk to practice measuring lengths. *Coordinates with Lesson 8.2* • Children practice predicting and measuring length by playing the game How Long? *Coordinates with Lesson 8.6* • Divide the class into small groups and give each a ruler. Go outside and collect leaves. Each group measures the leaves that it has collected and then arranges the leaves in size order on a poster. • ** • Children complete "Batter Up!" on blue Activity Card 17 by comparing the lengths of everyday objects using base-ten blocks. *Coordinates with Lesson 9.2* • Children read the book A Trip to the Pond to practice using metric units to measure. *Coordinates with Lesson 9.5* • In talking about careers, ask students which jobs they think measuring would be very important. When someone mentions construction discuss what the	One day for each activity Weeks 24-29

construction worker would measure. Have children make their own "constructions" out of recyclable materials and measure the pieces that are used. • **Solve problems involving area and perimeter by acting them out. Ongoing activities • Math Journal • Math fact practice (Xtramath.com) The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	
Teacher Resources	*Teacher Note*
• Go Math! Teacher Resources • Math Boards • Colored tiles • Counting Tape • Rulers • Yarn • Yardsticks • Base-ten blocks • Math Journal • Drill exercises	****** These are objectives only for topics that need to be addressed not found in the Go Math! Series. Please use these objectives as guidelines in creating lessons for these objectives. Math journal questions, modified tests/quizzes, and addition facts practice sheets can be found in the Second Grade Supplemental Activities binder.

Differentiating Instruction:
Students with Disabilities, English Language Learners, and Gifted & Talented Students

Examples of Strategies and Practices that Support Students with Disabilities:
• Use of visual and multisensory formats
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• Modification of content and student products

• Testing accommodations
• Authentic assessments

Examples of Strategies and Practices that Support Gifted & Talented Students:
• Adjusting the pace of lessons
• Curriculum compacting
• Inquiry-based instruction
• Independent study
• Higher-order thinking skills
• Interest-based content
• Student-driven instruction
• Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:
• Pre-teaching of vocabulary and concepts
• Visual learning, including graphic organizers
• Use of cognates to increase comprehension
• Teacher modeling
• Pairing students with beginning English language skills with students who have more advanced English language skills
• Scaffolding
•Word walls
•Sentence frames
•Think-pair-share
•Cooperative learning groups

Mathematics- Grade 2 Unit Five

Unit Title: Graphs and Data

Unit Summary: Students will represent and interpret data presented in various ways.

Primary Interdisciplinary Connections: Reading -NJSLSA.R1, Writing -NJSLSA.W1, Speaking and Listening- NJSLSA.SL1.

21st Century Career and Life Themes: CRP8, CRP11

Learning Targets

Standards: NJSLS: 2.MD.10

Technology Standards: 8.1 Educational Technology – ISTE.7

Content Statements:

1	Measure and estimate length in standard units
2	Relate addition and subtraction to length
3	Represent and interpret data

Big Idea: Information can be sorted and compared for analysis.

Unit Essential Questions:	**Unit Enduring Understandings:**
• How can information make sense?	• Information can be sorted and presented on various graphs in order to be saved for future compare and contrast activities.

Unit Learning Targets
Students will…

- Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.

Evidence of Learning

Summative Assessment: Chapter 10 test from Go Math series

Formative Assessments:

- Administer the Performance Task at the end of each chapter.
- Complete the Review Project online Measuring Up upon the completion of the unit.

Lesson Plans

Activities	*Timeframe*

• Children complete "Tally Ho!" on orange Activity Card 2 by using tally marks to compare numbers. *Coordinates with Lesson 10.1* • Children read the book Wow! Fluffo Sure Can Eat and survey and record the dog treats in the book. *Coordinates with Lesson 10.2* • Children play the game *Race to Finish* to practice recording data on a graph. *Coordinates with Lesson 10.4* • Record the weather on a tally chart for two weeks. Then children use the data to make a picture or bar graph. • **Locate and name points on a coordinate grid. Ongoing activities • Math Journal • Math fact practice (Xtramath.com) The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	One day for each activity Weeks 30-32
Teacher Resources	*Teacher Note*
• Go Math Teacher resources • Math Board • Unifix cubes • Counting Tape • Math Journal • Drill exercises	** These are objectives only for topics that need to be addressed not found in the Go Math! Series. Please use these objectives as guidelines in creating lessons for these objectives. Math journal questions, modified tests/quizzes, and addition facts practice sheets can be found in the Second Grade Supplemental Activities binder.

Differentiating Instruction: Students with Disabilities, English Language Learners, and Gifted & Talented Students

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Examples of Strategies and Practices that Support Gifted & Talented Students:
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- Curriculum compacting
- Inquiry-based instruction
- Independent study
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- Interest-based content
- Student-driven instruction
- Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:
- Pre-teaching of vocabulary and concepts
- Visual learning, including graphic organizers
- Use of cognates to increase comprehension
- Teacher modeling
- Pairing students with beginning English language skills with students who have more advanced English language skills
- Scaffolding
- Word walls
- Sentence frames
- Think-pair-share
- Cooperative learning groups

Mathematics- Grade 2 Unit Six

Unit Title: Geometry

Unit Summary: Students will reason with shapes and their attributes.

Primary Interdisciplinary Connections: Reading -NJSLSA.R1, Writing -NJSLSA.W1, Speaking and Listening- NJSLSA.SL1.

21st Century Career and Life Themes: CRP8, CRP11

Learning Targets

NJSLS Standards NJSLS: 2.G.1-3

Technology Standards: 8.1 Educational Technology – ISTE.7

Content Statements:

1	Reason with shapes and their attributes

Big Idea: Shapes are all around and are the foundation for everyday items.

Unit Essential Questions:	Unit Enduring Understandings:
• How can three-dimensional and two-dimensional shapes be manipulated?	• Shapes have attributes that define them and allow them to be constructed and deconstructed based on those attributes.

Unit Learning Targets
Students will…

- Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
- Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths.
- Recognize that equal shares of identical wholes need not have the same shape.

Evidence of Learning

Summative Assessment: Chapter 11 test from Go Math series

Formative Assessments:

- Conduct the "Show What You Know" assessment prior to each chapter.
- Administer the Performance Task at the end of each chapter.
- Complete Review Project online Design a Box upon completion of the unit.

Lesson Plans

Activities	*Timeframe*
• Children complete “Hexagonal Hopscotch” on purple Activity Card 10 by recognizing two-dimensional shapes. *Coordinates with Lesson 11.3* • Children read the book Square Fair to learn about decomposing a two-dimensional shape. *Coordinates with Lesson 11.4* • Children practice identifying two-dimensional figures within shapes. *Coordinates with Lesson 11.7* • Poll the class to see what cultures are represented. Research what flags are from these countries. Have the children identify the different shapes and their angles. • **Identify and show any fraction of a region (non-unit). Ongoing activities • Math Journal • Math fact practice (Xtramath.com) The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	One activity for each day Weeks 33-36
Teacher Resources	*Teacher Note*
• Go Math Teacher Resources • Math Board • Three-dimensional shapes • Counting Tape • Ruler • Dot paper • Pattern Blocks	**These are objectives only for topics that need to be addressed not found in the Go Math! Series. Please use these objectives as guidelines in creating lessons for these objectives. Math journal questions, modified tests/quizzes, and addition facts

Differentiating Instruction: Students with Disabilities, English Language Learners, and Gifted & Talented Students

Examples of Strategies and Practices that Support Students with Disabilities:
- Use of visual and multisensory formats
- Use of assisted technology
- Use of prompts
- Modification of content and student products
- Testing accommodations
- Authentic assessments

Examples of Strategies and Practices that Support Gifted & Talented Students:
- Adjusting the pace of lessons
- Curriculum compacting
- Inquiry-based instruction
- Independent study
- Higher-order thinking skills
- Interest-based content
- Student-driven instruction
- Real-world problems and scenarios

Examples of Strategies and Practices that Support English Language Learners:
- Pre-teaching of vocabulary and concepts
- Visual learning, including graphic organizers
- Use of cognates to increase comprehension
- Teacher modeling
- Pairing students with beginning English language skills with students who have more advanced English language skills
- Scaffolding
- Word walls
- Sentence frames
- Think-pair-share
- Cooperative learning groups

Mathematics- Grade 2 Unit Seven

Unit Title: Getting ready for Third Grade

Unit Summary: Students will be introduced to a variety of concepts that will be explored in-depth in Third Grade in order to prepare them for the new material.

Primary Interdisciplinary Connections: Reading -NJSLSA.R1, Writing -NJSLSA.W1, Speaking and Listening- NJSLSA.SL1.

21st Century Career and Life Themes: CRP8, CRP11

Learning Targets

NJSLS Standards: 2.OA.2, 2.3.OA.9, 2.NBT.1-7

Technology Standards: 8.1 Educational Technology – ISTE.7

Content Statements:

1	Understand place value
2	Use place value understanding and properties of operations to add and subtract
3	Measure and estimate lengths in standard units
4	Relate addition and subtraction to length
5	Work with time and money
6	Represent and interpret data
7	Reason with shapes and their attributes

Big Idea: The continuing growth of current skills will prepare for the future.

Unit Essential Questions:	**Unit Enduring Understandings:**
• How can preparation for Second Grade be achieved?	• Through review of what has been learned over the course of the year and an introduction of some new topics, preparation for Second Grade material can be achieved.

Unit Learning Targets

- Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- Explain why addition and subtraction strategies work, using place value and the properties of operations.
- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones
- Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens — called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- Count within 1000; skip-count by 5s, 10s, and 100s.
- Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

- Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
- Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Add up to four two-digit numbers using strategies based on place value and properties of operations.
- Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Evidence of Learning

Summative Assessment: N/A

Formative Assessments:

Projects serve as assessments of whole year learning.

Lesson Plans

Activities	*Timeframe*
• Complete activity "Books for Sale" Review Project • Complete activity "Plan a Trip to the Zoo" Review Project • Complete activity "Measuring Up!" Review Project • Complete activity "Shape Designs" Review Project • Lesson- Find Sums on an Addition Table • Lesson- Estimate Sums: 2 Digit Addition Ongoing activities • Math Journal • Math fact practice (Xtramath.com) The following Mathematical Practices are to be included in math activities: 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively.	One day for each activity Weeks 37-38

3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	
Teacher Resources	*Teacher Note*
• Go Math! Teacher's planning guide • Rulers • Yardsticks • Meter sticks • Math Board • Math Journal • Drill exercises	These activities are in detail in the Go Math! Planning Guide Math journal questions, modified tests/quizzes, and addition facts practice sheets can be found in the Second Grade Supplemental Activities binder.

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