GOMath!

Grade 1

Curriculum

Lower Township Elementary Schools
2015

Course Description:

In Grade 1, instructional time should focus on four critical areas: developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; developing understanding of whole number relationships and place value, including grouping in tens and ones; developing understanding of linear measurement and measuring lengths as iterating length units; and reasoning about attributes of, and composing and decomposing geometric shapes.

Students develop strategies based on prior knowledge and understanding of what they already know about numbers when adding and subtracting whole numbers. Students will use different types of manipulatives to visualize and solve a variety of addition of addition and subtraction problems. Students will use cubes, five-frames, and ten-frames to model add-to, take-from, put-together, and take-apart. Students will need exposure to addition/subtraction experiences in order to develop strategies to solve math problems within 20.

Students will use strategies to add numbers within 100 and subtract quantities of 10. They compare and analyze whole numbers within 100 using understanding of tens and ones.

Students acquire an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement).

Students build and break-down plane and solid figures (e.g, put two triangles together to make a quadrilateral) and develop 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 understanding of properties such as congruence and symmetry.

Course Goals:

A. Operations and Algebraic Thinking - 1.OA

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and Subtract within 20.
- Work with addition and subtraction equations.

B. Number and Operations in Base Ten - 1.NBT

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

C. Measurement and Data – 1.MD

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

D. Geometry – 1.G

- Reason with shapes and their attributes.

Course Enduring Understandings:

Ideas that have lasting value beyond the classroom. Consider, "what do we want students to understand and be able to use several years from now, after they have forgotten the details?"

A. Operations and Algebraic Thinking - 1.OA

- We can find missing numbers in a number model/equation or word problem using addition and subtraction.
- Understanding how addition and subtraction are related helps us to solve a variety of math problems.
- Adding and subtracting changes how many or how much of something we have.
- Using our number sense and strategies will help us solve addition and subtraction problems.
- Equations allow us to write mathematical sentences.
- True equations have the same value on both sides.
- False equations have different values on both sides.

B. Number and Operations in Base Ten - 1.NBT

- We recognize the sequential pattern when reading, writing, and counting numbers.
- We organize numbers by tens and ones to help us count and compare numbers.
- Place value is based on groups of 10.
- Our number system is organized in groups of tens to help us add and subtract numbers.

C. Measurement and Data – 1.MD

- We can use objects as units to measure lengths of things.
- There are 60 minutes in an hour.
- An analog clock has a short hand to represent hours and a longer hand to represent minutes.
- On a digital clock, the number to the left of the colon represents the hour, and the number on the right of the colon represents the minutes after the hour.
- We use data to compare how toe or more groups are similar or different.
- By organizing and sorting data, we can describe and compare the numbers in a group.

D. Geometry – 1.G

- Identifying the properties of shapes can help sort them. By breaking apart large shapes we can make new shapes and name them as halves, fourths, and quarters.
- A line of symmetry can identify a shape as being symmetrical.

Common Core State Standards:

Grade 1 Overview

Operations and Algebraic Thinking

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and subtract within 20.
- Work with addition and subtraction equations.

Number and Operations in Base Ten

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

Geometry

- Reason with shapes and their attributes.

Mathematical Practices

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.

Operations and Algebraic Thinking 1.OA

Represent and solve problems involving addition and subtraction.

1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.[2]
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Understand and apply properties of operations and the relationship between addition and subtraction.

3. Apply properties of operations as strategies to add and subtract.[3] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*
4. Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.*

Add and subtract within 20.

5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

Work with addition and subtraction equations.

7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*
8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*

Number and Operations in Base Ten — 1.NBT

Extend the counting sequence.

1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Understand place value.

2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
   a. 10 can be thought of as a bundle of ten ones — called a "ten."
   b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
   c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.

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

4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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 and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), 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 and explain the reasoning used.

Measurement and Data 1.MD

Measure lengths indirectly and by iterating length units.

1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

Tell and write time.

3. Tell and write time in hours and half-hours using analog and digital clocks.

Represent and interpret data.

4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Geometry 1.G

Reason with shapes and their attributes.

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.[4]
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

21st Century Skills:

Career Ready Practices	
1. Act as a responsible and contributing citizen and employee.	**X**
2. Apply appropriate academic and technical skills	**X**
3. Attend to personal health and financial well-being.	**X**
4. Communicate clearly and effectively and with reason.	**X**
5. Consider the environmental, social and economic impacts of decisions	**X**
6. Demonstrate creativity and innovation.	**X**
7. Employ valid and reliable research strategies.	**X**
8. Utilize critical thinking to make sense of problems and persevere in solving them.	**X**
9. Model integrity, ethical leadership and effective management.	**X**
10. Plan education and career paths aligned to personal goals.	**X**
11. Use technology to enhance productivity.	**X**
12. Work productively in teams while using cultural global competence.	**X**

Unit Names:

Operations and Algebraic Thinking
Numbers and Operations in Base Ten
Measurement and Data
Geometry

Materials :

Houghton Mifflin-Harcourt GOMath 2015

Infusion of Technology :

8.1.P.A.1 Use an input device to select an item and navigate the screen

8.1.P.A.2 Navigate the basic functions of a browser.

8.1.P.A.3 Use digital devices to create stories with pictures, numbers, letters and words.

8.1.P.A.4 Use basic technology terms in the proper context in conversation with peers and teachers (e.g., camera, tablet, Internet, mouse, keyboard, and printer).

8.1.P.A.5 Demonstrate the ability to access and use resources on a computing device.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

8.1.P.C.1 Collaborate with peers by participating in interactive digital games or activities.

8.1.2.C.1 Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.

8.1.P.E.1 Use the Internet to explore and investigate questions with a teacher's support.

8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

Course Assessments:

Formative Assessments:

Classwork
Homework
Classroom observations
Questioning
Discussion
Individual whiteboards

Summative Assessments:
Chapter Assessments
End-of-year Assessment

Content Area:	Mathematics	Grade(s)	1
Unit Plan Title:	Operations and Algebraic Thinking		

Anchor Standard (ELA) or Domain (Math)

Operations and Algebraic Thinking - 1.OA

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and Subtract within 20.
- Work with addition and subtraction equations.

Overview/Rationale

Students develop strategies based on prior knowledge and understanding of what they already know about numbers when adding and subtracting whole numbers. Students will use different types of manipulatives to visualize and solve a variety of addition of addition and subtraction problems. Students will use cubes, five-frames, and ten-frames to model add-to, take-from, put-together, and take-apart. Students will need exposure to addition/subtraction experiences in order to develop strategies to solve math problems within 20.

Standard(s)

- 1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent problems.
- 1.OA.2 Solve word problems that call addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent problems.
- 1.OA.3 Apply properties of operations as strategies to add and subtract. Examples: If 8 + 3 = 11 is known, then 3+8=11 is also known (Commutative property of addition). To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (Associative property of addition).
- 1.OA.4 Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.
- 1.OA.5 Relate counting to addition and subtracting (e.g., by counting on 2 to add 2).
- 1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making 10 (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to 10 (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9)); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12 , one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).
- 1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true and false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
- 1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ___ - 3, 6 + 6 = _____.

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

Technology Standard(s)

8.1.P.A.1 Use an input device to select an item and navigate the screen

8.1.P.A.2 Navigate the basic functions of a browser.

8.1.P.A.3 Use digital devices to create stories with pictures, numbers, letters and words.

8.1.P.A.4 Use basic technology terms in the proper context in conversation with peers and teachers (e.g., camera, tablet, Internet, mouse, keyboard, and printer).

8.1.P.A.5 Demonstrate the ability to access and use resources on a computing device.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

8.1.P.C.1 Collaborate with peers by participating in interactive digital games or activities.

8.1.2.C.1 Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.

8.1.P.E.1 Use the Internet to explore and investigate questions with a teacher's support.

8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

Standards for Mathematical Practice(s)

1. Make sense of problems and persevere in solving problems.
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.
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Essential Question(s)

- How can you model adding within 10?
- How do pictures show adding to?
- How do you model adding to a group?
- How do you model putting together?
- How do you solve addition problems by making a model?
- What happens when you add 0 to a number?
- Why can you add addends in any order?
- How can you show all the ways to make a number?
- Why are some addition facts easy to add?

- How can you subtract numbers from 10 or less?
- How can you show taking from with pictures?
- How do you model taking from a group?
- How do you model taking apart?
- How do you solve subtraction problems by making a model?
- How can you use pictures to compare and subtract?
- How can you use models to compare and subtract?
- What happens when you subtract 0 from a number?
- How can you show all the ways to take apart a number?
- Why are some subtraction facts easy to subtract?
- How do you solve addition problems?
- What happens if you change the order of the addends when you add?
- How do you count on 1, 2, or 3?
- What are doubles facts?
- How can you use doubles to help you add?
- How can you use what you know about doubles to find other sums?
- What strategies can you use to solve addition fact problems?
- How can you use a ten frame to add 10 and some more?
- How do you use the make a ten strategy to add?
- How can you make a ten to help you add?
- How can you add three addends?
- How can you group numbers to add three addends?
- How do you solve addition word problems by drawing a picture?
- How do you solve subtraction problems?
- How can you count back 1, 2, or 3?
- How can you use an addition fact to find the answer to a subtraction fact?
- How can you use addition to help you find the answer to a subtraction fact?
- How can you make a ten to help you subtract?
- How do you break apart a number to subtract?
- How can acting out a problem help you solve the problem?
- How can relating addition and subtraction help you to learn and understand facts within 20?
- How can making a model help you solve a problem?
- How do related facts help you find missing numbers?
- How do you know if addition and subtraction facts are related?
- How can you use addition to check subtraction?
- How can you use a related fact to find a missing number?
- How do you choose when to add and when to subtract to solve a problem?
- How can you add and subtract in different ways to make the same number?
- How can you decide if a number sentence is true or false?
- How can addition and subtraction strategies help you find sums and differences?

Enduring Understandings

- We can find missing numbers in a number model/equation or word problem using addition and subtraction.
- Understanding how addition and subtraction are related helps us to solve a variety of math problems.

- Adding and subtracting changes how many or how much of something we have.
- Using our number sense and strategies will help us solve addition and subtraction problems.
- Equations allow us to write mathematical sentences.
- True equations have the same value on both sides.
- False equations have different values on both sides.

In this unit plan, the following 21st Century Career Ready Practices are addressed.

Career Ready Practices	
1. Act as a responsible and contributing citizen and employee.	**X**
2. Apply appropriate academic and technical skills	**X**
3. Attend to personal health and financial well-being.	**X**
4. Communicate clearly and effectively and with reason.	**X**
5. Consider the environmental, social and economic impacts of decisions	**X**
6. Demonstrate creativity and innovation.	**X**
7. Employ valid and reliable research strategies.	**X**
8. Utilize critical thinking to make sense of problems and persevere in solving them.	**X**
9. Model integrity, ethical leadership and effective management.	**X**
10. Plan education and career paths aligned to personal goals.	**X**
11. Use technology to enhance productivity.	**X**
12. Work productively in teams while using cultural global competence.	**X**

Student Learning Targets/Objectives

- Represent and solve problems involving addition and subtraction by
  - adding to
  - taking from
  - putting together
  - taking apart
- Understand and apply properties of operations and the relationship between addition and subtraction by
  - using five- and ten-frames
  - solving number stories
  - counting up and back on a number line/number grid

- practicing addition and subtraction facts

- Add and Subtract within 20 by
  - using five- and ten-frames
  - counting up and down on a number grid/number line
  - number models for change-to –more situations
  - using frames and arrows
  - addition facts and fact power
  - name collection boxes
  - fact families
  - subtraction facts and fact power
  - domino addition
- Work with addition and subtraction number stories by
  - using five- and ten-frames
  - number models for change-to –more situations
  - using a number line/number grid
  - name collection boxes
  - dice sums

Assessments

- Pre and Formative
  - Prerequisite Assessment
  - Lesson Quick Check
  - Mid-Chapter Checkpoint
  - Digital Personal Math Trainer
  - Math on the Spot Video
- Summative
  - Chapter 1 Test
  - Chapter 2 Test
  - Chapter 3 Test
  - Chapter 4 Test
  - Chapter 5 Test
- Other assessment measures
  - Show What You Know
  - Diagnostic Interview Task
  - Digital Personal Math Trainer
  - Performance Assessment Task
  - Chapter Review Test

Teaching and Learning Actions

Instructional Strategies D	• Breaking down the task • Providing step-by-step prompts • Daily testing /teacher observation • Repeated practice • Sequenced Review • Directed Questioning and Responses • Sequence Tasks from Easy to Difficult • Individual/Small-Group/Whole Class Instruction • Think Aloud

	• Peer Tutoring • Think-Pair-Share • Active Participation • Warm-Up Activities • Meaningful Real Life Connections • Modeling - Teachers demonstrates, student uses models to problem solve • Centers • Manipulatives – Concrete Experiences • Goal Setting • Mental Math • Pencil & Paper Skills • Calculator Use/Technology • Graphic Organizers • Make Predictions/Estimation • Writing Explanations • Scaffolding • Informal assessment • Differentiation Strategies **Strategies for Basic Math Facts** • Counting on • Doubles • Doubles + 1 and +2 • Making a 10 • Counting Back • Counting Up • Fact Families • Turn around facts • Counting Strategies: +0, +1, +2, +3, +5, +8, +9, +10 • Five Frame • Ten Frame • Number Model • Picture • Breaking down the task • Providing step-by-step prompts • Think Aloud • Peer Tutoring • Think-Pair-Share • Manipulatives – Concrete Experiences • Calculator Use/Technology • Graphic Organizers
Activities	• Five & Ten Frames • Monster Squeeze Game • Top-It Game • Tell Simple Number Stories • Penny Plate Game • Penny Grab Game

	• Penny-Dice Game • Number Models • High Roller Game • Using the Number Lines • Bunny Hop Game • Frame and Arrow routines • Finding the arrow rule • Adding on the number grid • Domino Top-It Game • Find Sums Using Dominos Game • Addition Top-It Game • Shaker Addition Top-It Game • Difference Game • Solve comparison number stories • Find the number of dots missing on dominoes • Fact Power Game • 3, 2, 1 Game

Resources

1.OA.A.1

GoMath! Grade 1:

- Lessons: 1.1-1.4, 1.7, 2.1-2.4, 2.6, 2.8, 4.6, 5.1, 5.7

1.OA.A.2

GoMath! Grade 1:

- Lessons: 3.12

1.OA.B.3

GoMath! Grade 1:

- Lessons: 1.5, 1.6, 1.8, 3.1, 3.10, 3.11

1.OA.B.4

GoMath! Grade 1:

- Lessons: 4.2-2.3

1.OA.C.5

GoMath! Grade 1:

- Lessons: 3.2, 4.1

1.OA.C.6

GoMath! Grade 1:

- Lessons: 1.8, 2.9, 3.3- 3.9, 4.4-4.5, 5.2-5.4, 5.8, 5.10

1.OA.D.7

GoMath! Grade 1:

- Lessons: 5.5-5.6

1.OA.D.8

GoMath! Grade 1:

- Lessons: 2.5, 2.7, 5.5-5.6

MP1

GoMath! Grade 1:

- Lessons: 1.1-1.4, 2.1-2.6, 3.1-3.2, 3.4, 3.12, 4.3, 4.6, 5.1-5.2, 5.5

MP2

GoMath! Grade 1:

- Lessons: 1.5, 2.1-2.2, 2.5, 3.7-3.10, 3.12, 4.1, 4.4-4.6, 5.1, 5.6

MP3

GoMath! Grade 1:

- Lesson: 1.6, 2.5, 2.7-2.8, 3.6, 3.11, 4.2, 4.6,, 5.7

MP4

GoMath! Grade 1:

- Lesson: 1.1-1.5, 1.7, 2.1-2.8, 3.1, 3.9, 3.12, 4.1-4.6, 5.1, 5.3-5.4, 5.6-5.7

MP5

GoMath! Grade 1:

- Lesson: 1.1-1.4, 2.3-2.4, 3.3-3.4, 4.3-4.5, 5.2, 5.8

MP6

GoMath! Grade 1:

- Lesson: 1.2, 1.7-1.8, 2.6, 2.9, 3.1-3.2, 3.5, 4.1, 4.3, 5.7

MP7

GoMath! Grade 1:

- Lesson: 1.5, 1.7-1.8, 2.8, 3.3-3.6, 4.2, 5.2-5.6, 5.8

MP8

GoMath! Grade 1:

- Lesson: 1.6, 2.7, 2.9, 3.2.-3.3., 3.11, 4.4, 5.2-5.5

ThinkCentral **Personal Math Trainer** **GoMath! Academy**	
Suggested Time Frame:	68 days

D- Indicates differentiation at the Lesson Level.

Content Area:	Mathematics	Grade(s)	1
Unit Plan Title:	Number and Operations in Base Ten		

Anchor Standard (ELA) or Domain (Math)

Number and Operations in Base Ten - 1.NBT

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Overview/Rationale

Students will use strategies to add numbers within 100 and subtract quantities of 10. They compare and analyze whole numbers within 100 using understanding of tens and ones.

Standard(s)

- 1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
- 1.NBT.2 Understand that the two digits of a two-digit represent amounts of tens and ones. Understand the following as special cases:
  - 10 can be thought of as a bundle of ten ones- called a “ten”.
  - The numbers from 11 to 10 are composed of a ten and one, two, two, three, four, five, six, seven, eight, or nine ones.
  - The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
- 1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
- 1.NBT.4 Add within 100, including adding a two-digit number and a multiple of 10, 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 and explain the reasoning used. Understand in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose ten.
- 1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
- 1.NBT.6 Subtract multiples of 10 in the range 10 – 90 from multiples of 10 in the range 10 – 90 (positive or zero differences), using concrete models or drawing and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
- MP1 Make sense of problems and preserver in solving them.
- MP2 Reason abstractly and quantitatively.
- MP3 Construct viable arguments and critique the reasoning of others.
- MP4 Model with mathematics.
- MP5 Use appropriate tools strategically.

- MP6 Attend to precision.
- MP7 Look for and make use of structure.
- MP8 Look for and express regularity in repeated reasoning.

Technology Standard(s)

8.1.P.A.1 Use an input device to select an item and navigate the screen

8.1.P.A.2 Navigate the basic functions of a browser.

8.1.P.A.3 Use digital devices to create stories with pictures, numbers, letters and words.

8.1.P.A.4 Use basic technology terms in the proper context in conversation with peers and teachers (e.g., camera, tablet, Internet, mouse, keyboard, and printer).

8.1.P.A.5 Demonstrate the ability to access and use resources on a computing device.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

8.1.P.C.1 Collaborate with peers by participating in interactive digital games or activities.

8.1.2.C.1 Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.

8.1.P.E.1 Use the Internet to explore and investigate questions with a teacher's support.

8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

Standards for Mathematical Practice(s)

1. Make sense of problems and persevere in solving problems.
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.

Essential Question(s)

- How do you use place value to model, read, and write numbers to 120?
- How can knowing a counting pattern help you count to 120?
- How do numbers change as you count by tens to 120?
- How can you use different ways to write a number as ten and ones?
- How can you show a number as ten and ones?
- How can you model and name groups of ten?
- How can you group cubes to show a number as tens and ones?
- How can you show numbers to 100 as tens and ones?
- How can making a model help you show a number in different ways?
- How can you model, read, and write numbers from 100 to 110?
- How can you model, read, and write numbers from 110 to 120?
- How do you use place value to compare to compare numbers?
- How can you compare two numbers to find which is greater?
- How can you compare two numbers to find which is less?

- How can you use symbols to show how numbers compare?
- How can making a model help you compare numbers?
- How can you identify numbers that are 10 less or 10 more than a number?
- How can you add and subtract two-digit numbers?
- What strategies can you use to add and subtract?
- How can you add tens?
- How can you subtract tens?
- How can you use a hundred chart to count on by ones or tens?
- How can models help you add ones or tens to a two-digit number?
- How can making a ten help you add a two-digit number and a one-digit number?
- How can you model tens and ones to help you add two-digit numbers?
- How can drawing a picture help you explain how to solve an addition problem?
- How can you use a hundred chart to show the relationship between addition and subtraction?
- What different ways can you use to add and subtract?

Enduring Understandings

- We recognize the sequential pattern when reading, writing, and counting numbers.
- We organize numbers by tens and ones to help us count and compare numbers.
- Place value is based on groups of 10.
- Our number system is organized in groups of tens to help us add and subtract numbers.

In this unit plan, the following 21st Century Career Ready Practices are addressed.

Career Ready Practices	
1. Act as a responsible and contributing citizen and employee.	**X**
2. Apply appropriate academic and technical skills	**X**
3. Attend to personal health and financial well-being.	**X**
4. Communicate clearly and effectively and with reason.	**X**
5. Consider the environmental, social and economic impacts of decisions	**X**
6. Demonstrate creativity and innovation.	**X**
7. Employ valid and reliable research strategies.	**X**
8. Utilize critical thinking to make sense of problems and persevere in solving them.	**X**
9. Model integrity, ethical leadership and effective management.	**X**
10. Plan education and career paths aligned to personal goals.	**X**
11. Use technology to enhance productivity.	**X**
12. Work productively in teams while using cultural global competence.	**X**

Student Learning Targets/Objectives

- Extend the counting sequence by
  - Counting up and down on a number line
  - Count up and down on a number grid
- Understand place value by
  - Using manipulatives (cubes and longs)
- Use place value understanding and properties of operations to add and subtract by
  - Using the arrow rule
  - Creating number stories
  - Counting up
  - Using number grids/number lines

Assessments

- Pre and Formative
  - Prerequisite Assessment
  - Lesson Quick Check
  - Mid-Chapter Checkpoint
  - Digital Personal Math Trainer
  - Math on the Spot Video
- Summative

- Chapter 6 Test
- Chapter 7 Test
- Chapter 8 Test

- Other assessment measures
  - Show What You Know
  - Diagnostic Interview Task
  - Digital Personal Math Trainer
  - Performance Assessment Task
  - Chapter Review Test

Teaching and Learning Actions	
Instructional Strategies *D*	• Breaking down the task • Providing step-by-step prompts • Daily testing /teacher observation • Repeated practice • Sequenced Review • Directed Questioning and Responses • Sequence Tasks from Easy to Difficult • Individual/Small-Group/Whole Class Instruction • Think Aloud • Peer Tutoring • Think-Pair-Share • Active Participation • Warm-Up Activities • Meaningful Real Life Connections • Modeling - Teachers demonstrates, student uses models to problem solve • Centers • Manipulatives – Concrete Experiences • Goal Setting • Mental Math • Pencil & Paper Skills • Calculator Use/Technology • Graphic Organizers • Make Predictions/Estimation • Writing Explanations • Scaffolding • Informal assessment • Differentiation strategies **Strategies for Basic Math Facts** • Counting on • Doubles • Doubles + 1 and +2 • Making a 10 • Counting Back • Counting Up • Fact Families • Turn around facts • Counting Strategies: +0, +1, +2, +3, +5, +8, +9, +10

	• Five Frame • Ten Frame • Number Model • Picture • Breaking down the task • Providing step-by-step prompts • Think Aloud • Peer Tutoring • Think-Pair-Share • Manipulatives – Concrete Experiences • Calculator Use/Technology • Graphic Organizers
Activities	• Counting Days of School • Making Number Collections • Monster Squeeze Game • Penny Dice Game • Bunny Hop Game • Dice-Roll and Tally • Five & Ten Frames • Compare and Order numbers using number cards • Top-It Game • Rolling for 50 Game • Number Grid Counting • Number Models • Writing Numerals • Adding on a Numeral Grid • Digit Game • Finding Patterns on the Calculators • Base-10 Exchange Game • Create and solve number stories involving addition and subtraction • High Roller Game • Finding the Missing Number on Fact Triangles • 3, 2, 1 Game • Difference Game • Name hidden numbers on a number grid • Number Grid game • Number Grid Puzzles

Resources

1.NBT.A.1

GoMath! Grade 1:

- Lessons: 6.1, 6.2, 6.9, 6.10

1.NBT.B.2

GoMath! Grade 1:

- Lessons: 6.3- 6.8

1.NBT.B.3

GoMath! Grade 1:

- Lessons: 7.1- 7.4

1.NBT.C.4

GoMath! Grade 1:

- Lessons: 8.2, 8.4-8.10

1.NBT.C.5

GoMath! Grade 1:

- Lessons: 7.5

1.NBT.C.6

GoMath! Grade 1:

- Lessons: 8.3, 8.9-8.10

1.OA.C.6

GoMath! Grade 1:

- Lessons: 8.1

MP1

GoMath! Grade 1:

- Lessons: 6.8, 7.3, 7.5, 8.1, 8.7-8.8

MP2

GoMath! Grade 1:

- Lessons: 6.2, 6.4, 6.7, 7.4-7.5, 8.2, 8.6-8.9

MP3

GoMath! Grade 1:

- Lessons: 6.3-6.4, 7.2, 7.5, 8.1, 8.3, 8.9

MP4

GoMath! Grade 1:

- Lessons: 6.4-6.10, 7.3-7.4, 8.3-8.5

MP5

GoMath! Grade 1:

- Lessons: 6.1-6.3, 6.6, 6.9, 7.1-7.2, 8.4

MP6

GoMath! Grade 1:

- Lessons: 6.3-6.4, 6.6-6.8, 6.10, 7.4-7.5, 8.1, 8.3-8.5, 8.7-8.8

MP7

GoMath! Grade 1:

- Lessons: 6.1, 6.5, 6.8-6.9, 7.1-7.2, 8.2, 8.7, 8.9

MP8

GoMath! Grade 1:

- Lessons: 6.1-6.2, 6.5, 7.3, 8.3, 8.8

Suggested Time Frame:	40 days

D- Indicates differentiation at the Lesson Level.

Content Area:	Mathematics	Grade(s)	1
Unit Plan Title:	Measurement and Data		

Anchor Standard (ELA) or Domain (Math)

Measurement and Data - 1.MD

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

Overview/Rationale

Students acquire an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement).

Standard(s)

- 1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- 1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
- 1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.
- 1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
- MP1 Make sense of problems and preserver in solving them.
- MP2 Reason abstractly and quantitatively.
- MP3 Construct viable arguments and critique the reasoning of others.
- MP4 Model with mathematics.
- MP5 Use appropriate tools strategically.
- MP6 Attend to precision.
- MP7 Look for and make use of structure.
- MP8 Look for and express regularity in repeated reasoning.

Technology Standard(s)

8.1.P.A.1 Use an input device to select an item and navigate the screen

8.1.P.A.2 Navigate the basic functions of a browser.

8.1.P.A.3 Use digital devices to create stories with pictures, numbers, letters and words.

8.1.P.A.4 Use basic technology terms in the proper context in conversation with peers and teachers (e.g., camera, tablet, Internet, mouse, keyboard, and printer).

8.1.P.A.5 Demonstrate the ability to access and use resources on a computing device.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games,

museums).

8.1.P.C.1 Collaborate with peers by participating in interactive digital games or activities.

8.1.2.C.1 Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.

8.1.P.E.1 Use the Internet to explore and investigate questions with a teacher's support.

8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

Standards for Mathematical Practice(s)

1. Make sense of problems and persevere in solving problems.
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.

Essential Question(s)

- How can you measure length and tell time?
- How do you order objects by length?
- How can you compare lengths of three objects to put them in order?
- How do you measure length using nonstandard units?
- How do you use a nonstandard measuring tool to measure length?
- How can acting it out help you solve measurement problems?
- How do you tell time to the hour on a clock that has only an hour hand?
- How do you tell time to the half hour on a clock that has only an hour hand?
- How are the minute hand and hour hand different for time to the hour and time to the half hour?
- How do you know whether to draw and write time to the hour or half hour?
- How can graphs and charts help you organize, represent, and interpret data?
- What do the pictures in a picture graph show?
- How do you make a picture graph to answer a question?
- How can you read a bar to find the number that a bar shows?
- How does a bar graph help you compare information?
- How do you count the tallies on a tally chart?
- Why is a tally chart a good way to show information that you have collected?
- How can showing information in a graph help you solve problems?

Enduring Understandings

- We can use objects as units to measure lengths of things.
- There are 60 minutes in an hour.
- An analog clock has a short hand to represent hours and a longer hand to represent minutes.
- On a digital clock, the number to the left of the colon represents the hour, and the number on the right of the colon represents the minutes after the hour.
- We use data to compare how toe or more groups are similar or different.
- By organizing and sorting data, we can describe and compare the numbers in a group.

In this unit plan, the following 21st Century Career Ready Practices are addressed.

Career Ready Practices	
1. Act as a responsible and contributing citizen and employee.	**X**
2. Apply appropriate academic and technical skills	**X**
3. Attend to personal health and financial well-being.	**X**
4. Communicate clearly and effectively and with reason.	**X**
5. Consider the environmental, social and economic impacts of decisions	**X**
6. Demonstrate creativity and innovation.	**X**
7. Employ valid and reliable research strategies.	**X**
8. Utilize critical thinking to make sense of problems and persevere in solving them.	**X**
9. Model integrity, ethical leadership and effective management.	**X**
10. Plan education and career paths aligned to personal goals.	**X**
11. Use technology to enhance productivity.	**X**
12. Work productively in teams while using cultural global competence.	**X**

Student Learning Targets/Objectives

- Measure lengths indirectly and by iterating length units by
  - Measuring various objects in nonstandard units by using themselves or other objects
  - Measuring various objects in standard units using a ruler
  - Measure and draw line segments of various objects
- Tell and write time by
  - Discussing the uses of clocks
  - Movement of hands
  - Determining AM and PM
  - Practicing showing and telling time
- Represent and interpret data by
  - Read numbers represented by tally marks
  - Collect data by surveying their class
  - Discuss the uses of everyday numbers
  - Create bar graphs based on surveying their class

Assessments

- Pre and Formative
  - Prerequisite Assessment
  - Lesson Quick Check
  - Mid-Chapter Checkpoint
  - Digital Personal Math Trainer
  - Math on the Spot Video
- Summative
  - Chapter 9 Test
  - Chapter 10 Test
- Other assessment measures
  - Show What You Know
  - Diagnostic Interview Task
  - Digital Personal Math Trainer
  - Performance Assessment Task
- Chapter Review Test

Teaching and Learning Actions	
Instructional Strategies *D*	• Breaking down the task • Providing step-by-step prompts • Daily testing /teacher observation • Repeated practice • Sequenced Review • Directed Questioning and Responses • Sequence Tasks from Easy to Difficult • Individual/Small-Group/Whole Class Instruction • Think Aloud • Peer Tutoring • Think-Pair-Share • Active Participation • Warm-Up Activities • Meaningful Real Life Connections • Modeling - Teachers demonstrates, student uses models to problem solve • Centers • Manipulatives – Concrete Experiences • Goal Setting • Mental Math • Pencil & Paper Skills • Calculator Use/Technology • Graphic Organizers • Make Predictions/Estimation • Writing Explanations • Scaffolding • Differentiation Strategies Informal assessment
Activities *D*	• Dice Roll and Tally Activity • Making a Clock • Dividing the 24 hour day into A.M. and P.M. • Telling time to the nearest hour

	• Making a class tally chart • Estimate the length of an object • Measuring heights • Making a bar graph from data • Time Match Game • Finding the typical height of children in the class

Resources

1.MD.A.1

GoMath! Grade 1:

- Lessons: 9.1, 9.2,

1.MD.A.2

GoMath! Grade 1:

- Lessons: 9.3-9.5,

1.MD.B. 3

GoMath! Grade 1:

- Lessons: 9.6-9.9

1.MD.C.4

GoMath! Grade 1:

- Lessons: 10.1-10.7

MP1

GoMath! Grade 1:

- Lessons: 9.1-9.3, 9.5, 9.7, 9.9, 10.6

MP2

GoMath! Grade 1:

- Lessons: 9.4, 9.8, 10.1, 10.5

MP3

GoMath! Grade 1:

- Lessons: 9.1-9.2, 9.4-9.5, 10.2-10.7

MP4

GoMath! Grade 1:

- Lessons: 9.2, 9.9, 10.1-10.6

MP5

GoMath! Grade 1:

- Lessons: 9.4, 9.6, 9.8, 10.3, 10.7

MP6

GoMath! Grade 1:

- Lessons: 9.1, 9.3, 9.6, 9.8, 10.2, 10.7

MP7

GoMath! Grade 1:

- Lessons: 9.6

MP8

GoMath! Grade 1:

- Lessons: 9.3, 9.7, 9.9, 10.4

Suggested Time Frame:	21 days

D- Indicates differentiation at the Lesson Level.

Content Area:	Mathematics	Grade(s)	1
Unit Plan Title:	Geometry		

Anchor Standard (ELA) or Domain (Math)

Geometry - 1.G

- Reason with shapes and their attributes.

Overview/Rationale

Students build and break-down plane and solid figures (e.g, put two triangles together to make a quadrilateral) and develop 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 understanding of properties such as congruence and symmetry.

Standard(s)

- 1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
- 1.G.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as “right rectangular prism”.)
- 1.G.3 Partition circles and rectangles into toe and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shapes.
- MP1 Make sense of problems and preserver in solving them.
- MP2 Reason abstractly and quantitatively.
- MP3 Construct viable arguments and critique the reasoning of others.
- MP4 Model with mathematics.
- MP5 Use appropriate tools strategically.
- MP6 Attend to precision.
- MP7 Look for and make use of structure.
- MP8 Look for and express regularity in repeated reasoning.

Technology Standard(s)

8.1.P.A.1 Use an input device to select an item and navigate the screen

8.1.P.A.2 Navigate the basic functions of a browser.

8.1.P.A.3 Use digital devices to create stories with pictures, numbers, letters and words.

8.1.P.A.4 Use basic technology terms in the proper context in conversation with peers and teachers (e.g., camera, tablet, Internet, mouse, keyboard, and printer).

8.1.P.A.5 Demonstrate the ability to access and use resources on a computing device.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

8.1.P.C.1 Collaborate with peers by participating in interactive digital games or activities.

8.1.2.C.1 Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.

8.1.P.E.1 Use the Internet to explore and investigate questions with a teacher's support.

8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

Standards for Mathematical Practice(s)

1. Make sense of problems and persevere in solving problems.
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.

Essential Question(s)

- How do you identify and describe three-dimensional shapes?
- How can you combine three-dimensional shapes to make new shapes?
- How can you use a combined shape to build new shapes?
- How can acting it out help you take apart combined shapes?
- What two-dimensional shapes do you see on the flat surfaces of three-dimensional shapes?
- How do you sort and describe two-dimensional shapes?
- How can you use attributes to sort two-dimensional shapes?
- What attributes can you use to describe two-dimensional shapes?
- How can you put two-dimensional shapes together to make new two-dimensional shapes?
- How can you combine two-dimensional shapes to make new shapes?
- How can acting it out help you make new shapes from combined shapes?
- How can you find shapes in other shapes?
- How can you take apart two-dimensional shapes?
- How can you identify equal and unequal parts in two-dimensional shapes?
- How can a shape be separated into two equal shares?
- How can a shape be separated into four equal shares?

Enduring Understandings

- Identifying the properties of shapes can help sort them. By breaking apart large shapes we can make new shapes and name them as halves, fourths, and quarters.
- A line of symmetry can identify a shape as being symmetrical.

In this unit plan, the following 21st Century themes and skills are addressed.

Career Ready Practices	
1. Act as a responsible and contributing citizen and employee.	**X**
2. Apply appropriate academic and technical skills	**X**
3. Attend to personal health and financial well-being.	**X**
4. Communicate clearly and effectively and with reason.	**X**
5. Consider the environmental, social and economic impacts of decisions	**X**
6. Demonstrate creativity and innovation.	**X**
7. Employ valid and reliable research strategies.	**X**
8. Utilize critical thinking to make sense of problems and persevere in solving them.	**X**
9. Model integrity, ethical leadership and effective management.	**X**
10. Plan education and career paths aligned to personal goals.	**X**
11. Use technology to enhance productivity.	**X**
12. Work productively in teams while using cultural global competence.	**X**

Student Learning Targets/Objectives

- Reason with shapes and their attributes by
  - Continue patterns using pattern blocks
  - Sort attribute blocks into different characteristics
  - Construct plane and solid figure using any manipulatives
  - Comparing and contrasting plane and solid figures
  - Classifying 3-dimensional shapes and finding objects that are similar
  - Dividing shapes into equal partitions

Assessments

- Pre and Formative
  - Prerequisite Assessment
  - Lesson Quick Check
  - Mid-Chapter Checkpoint
  - Digital Personal Math Trainer
  - Math on the Spot Video
- Summative
  - Chapter 11 Test

- Chapter 12 Test
- Other assessment measures
  - Show What You Know
  - Diagnostic Interview Task
  - Digital Personal Math Trainer
  - Performance Assessment Task
  - Chapter Review Test

Teaching and Learning Actions	
Instructional Strategies *D*	• Breaking down the task • Providing step-by-step prompts • Daily testing /teacher observation • Repeated practice • Sequenced Review • Directed Questioning and Responses • Sequence Tasks from Easy to Difficult • Individual/Small-Group/Whole Class Instruction • Think Aloud • Peer Tutoring • Think-Pair-Share • Active Participation • Warm-Up Activities • Meaningful Real Life Connections • Modeling - Teachers demonstrates, student uses models to problem solve • Centers • Manipulatives – Concrete Experiences • Goal Setting • Mental Math • Pencil & Paper Skills • Calculator Use/Technology • Graphic Organizers • Make Predictions/Estimation • Writing Explanations • Scaffolding • Informal assessment • Differentiation strategies
Activities *D*	• Covering shapes with pattern blocks • Create patterns with pattern blocks • Before and After Game • Make My Design Game • Make an attribute train • Attribute Train Game • Identifying 3-dimensional shapes • Making symmetrical shapes • Divide crackers equally among different number of people • Naming fractions in different ways • Constructing shapes

Resources
1.G.A.1 GoMath! Grade 1: • Lessons: 11.1, 11.5, 12.1-12.2 **1.G.A.2** GoMath! Grade 1: • Lessons: 11.2-11.4, 12.3-12.7 **1.G.3** Everyday Mathematics Grade 1: • Lessons: 8-6, 8-7, 8-9, 9-6, 9-7, 9-8, 12.8-12.10 **MP1** GoMath! Grade 1: • Lessons: 11.2-11.5, 12.4-12.5, 12.7-12.10 **MP2** GoMath! Grade 1: • Lessons: 11.2-11.3 **MP3** GoMath! Grade 1: • Lessons: 11.2-11.3, 12.8 **MP4** GoMath! Grade 1: • Lessons: 11.1, 11.5, 12.4-12.6, 12.9-12.10 **MP5** GoMath! Grade 1: • Lessons: 11.3, 12.3 **MP6** GoMath! Grade 1: • Lessons: 11.1-11.2, 11.4-11.5, 12.1-12.3, 12.8-12.10 **MP7** GoMath! Grade 1: • Lessons: 11.4, 12.1-12.2, 12.7 **MP8** GoMath! Grade 1: • Lessons: 11.1, 11.4, 12.1-12.2

Suggested Time Frame:	24 days

D- Indicates differentiation at the Lesson Levels