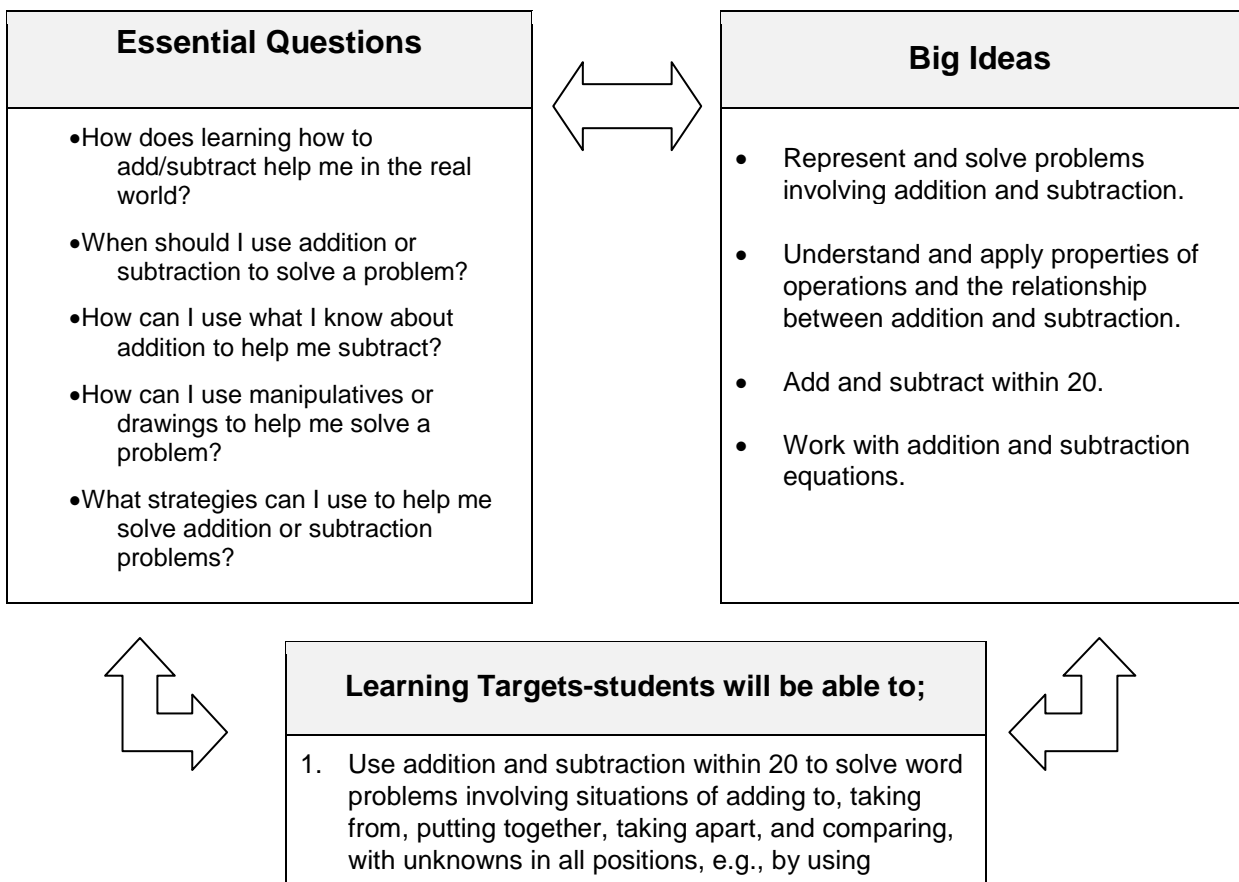


Grade 1 Math

Unit Title	Unit 1: Operations and Algebraic Thinking
Time frame	1 marking period with ongoing reinforcement.
21 st Century Themes	Critical Thinking and Problem Solving Communication and Collaboration ICT (Information, Communications and Technology) Literacy Flexibility and Adaptability Initiative and Self-Direction Productivity and Accountability
Interdisciplinary focus and technology integration	Music: Sing number songs. Language Arts: Read stories involving numbers. Technology: Use a calculator and the internet to practice addition and subtraction problems. Art: Draw pictures to represent addition and subtraction stories. Physical Education: Play games involving adding and subtracting numbers.

Stage 1: Integrate essential questions, big ideas and learning targets, and ensure it can be differentiated and assessed



objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Students need not use formal terms for these properties.)

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.
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.)*
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 $6 + 6 + 1 = 12 + 1 = 13$).
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 $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.*

Assessment

- Formal and Informal Teacher Observations
- Formative checks for understanding and summative assessments

- Tests / Quizzes

Differentiation

- Hands-On Activities
- Diagnostic Assessment (based on content /skill pre-tests)
- Kinesthetic Activities
- Re-teach and Enrichment Activities
- Power Presentations (Activ Boards)
- Cooperative Learning (Flexible Grouping)
- Peer Tutoring
- Tiered Activities

Stage 2: Backward planning: from the assessment to the learning activities through inquiry

Content Standards

1.OA 1, 2, 3, 4, 5, 6, 7, 8

Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8

Approaches to Learning

In this unit, students will acquire the knowledge to:

- Represent and solve addition and subtraction problems with whole numbers up to 20.

Learning Experiences

- Course of study
- Presentation of examples
- Hands-on activities and use of manipulatives
- Practice by homework
- Cumulative review exercises
- Test prep questions
- Problem solving activities

Teaching Strategies

- Direct instruction
- Differentiated instruction
- Interdisciplinary activities
- Cooperative learning activities
- Reinforcement and remediation

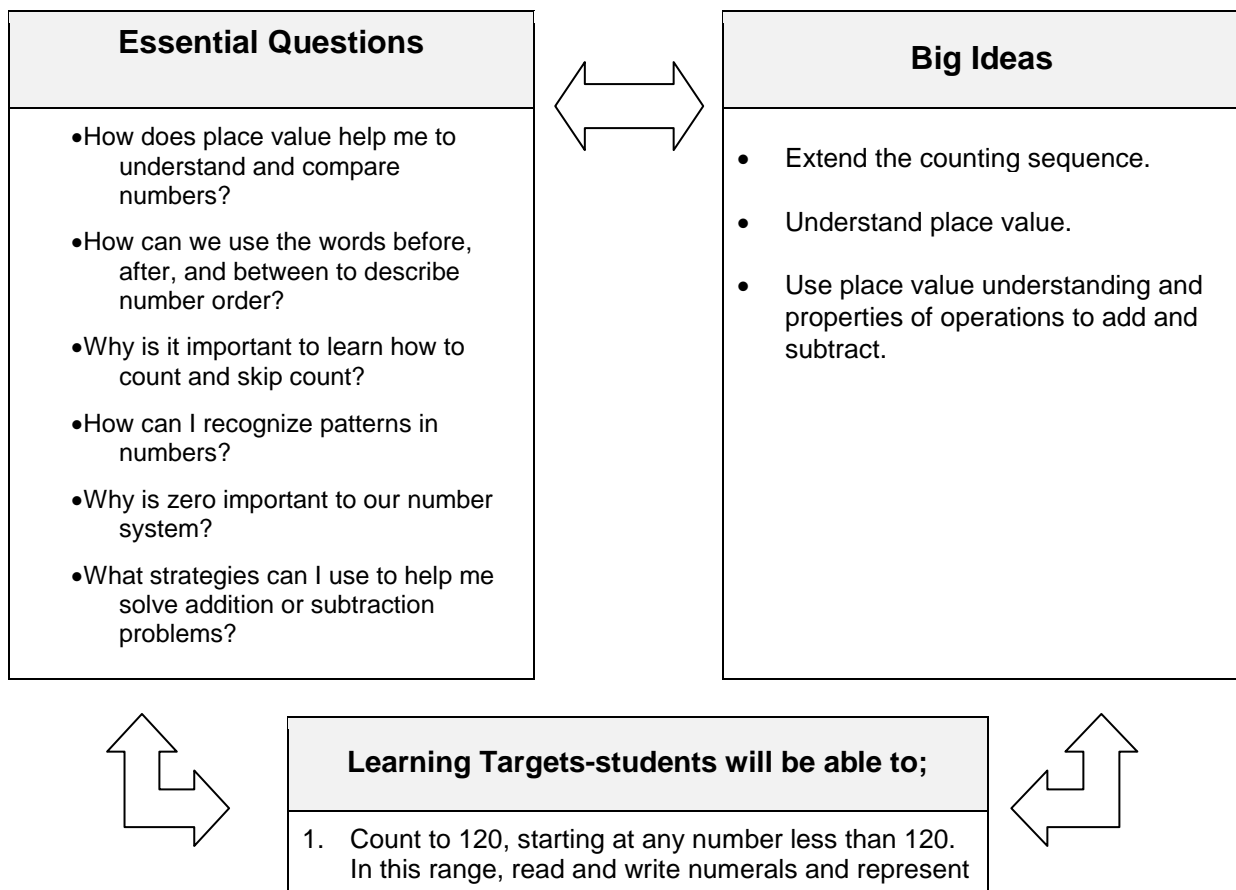
Resources

- Touch Math Addition Kit First Grade
- Touch Math Subtraction Kit First Grade

Grade 1 Math

Unit Title	Unit 2: Number and Operations in Base Ten
Time frame	1 marking period with ongoing reinforcement.
21 st Century Themes	Critical Thinking and Problem Solving Communication and Collaboration ICT (Information, Communications and Technology) Literacy Flexibility and Adaptability Initiative and Self-Direction Productivity and Accountability
Interdisciplinary focus and technology integration	Science: Use numbers when comparing dinosaurs. Technology: Use a calculator to skip count. Art: Make a collage of numbers found in circulars, newspapers, and magazines.

Stage 1: Integrate essential questions, big ideas and learning targets, and ensure it can be differentiated and assessed



- a number of objects with a written numeral.
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 $<$.
 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.

Assessment

- Formal and Informal Teacher Observations
- Formative checks for understanding and summative assessments
- Tests / Quizzes

Differentiation

- Hands-On Activities
- Diagnostic Assessment (based on content /skill pre-tests)
- Kinesthetic Activities
- Re-teach and Enrichment Activities

- Power Presentations (Activ Boards)
- Cooperative Learning (Flexible Grouping)
- Peer Tutoring
- Tiered Activities

Stage 2: Backward planning: from the assessment to the learning activities through inquiry

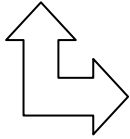
Content Standards	
1.NBT 1, 2, 3, 4, 5, 6 Mathematical Processes 1, 2, 3, 4, 5, 6, 7, 8	
Approaches to Learning	
In this unit, students will acquire the knowledge to: <ul style="list-style-type: none"> • Extend their ability to count, apply the principals of base ten numbers, and use their understanding of place value to compare and order numbers. 	
Learning Experiences	Teaching Strategies
<ul style="list-style-type: none"> • Course of study • Presentation of examples • Hands-on activities and use of manipulatives • Practice by homework • Cumulative review exercises • Test prep questions • Problem solving activities 	<ul style="list-style-type: none"> • Direct instruction • Differentiated instruction • Interdisciplinary activities • Cooperative learning activities • Reinforcement and remediation
Resources	

Grade 1 Math

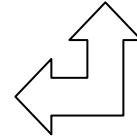
Unit Title	Unit 3: Measurement and Data
Time frame	1 marking period with ongoing reinforcement.
21 st Century Themes	Critical Thinking and Problem Solving Communication and Collaboration ICT (Information, Communications and Technology) Literacy Flexibility and Adaptability Initiative and Self-Direction Productivity and Accountability
Interdisciplinary focus and technology integration	Social Studies: Measure ingredients when preparing food for the First Grade Thanksgiving feast. Science: Measure dinosaur lengths and heights. Language Arts/Social Studies: Create graphs that relate to books read and holiday activities. Technology: Create graphs on the interactive whiteboard.

Stage 1: Integrate essential questions, big ideas and learning targets, and ensure it can be differentiated and assessed

Essential Questions	Big Ideas
<ul style="list-style-type: none"> • Why do we need to learn how to measure in everyday life? • How do we measure various objects? • Why is it important to measure using a standard tool? • Why do I need to tell time in daily life? • What is the relationship between analog and digital clocks? • How does recognizing coins help me in real life? • What strategies can I use to help me measure, tell time, and count money? • How can I represent data on a pictograph or bar graph? 	<ul style="list-style-type: none"> • Measure lengths indirectly and by iterating length units. • Tell and write time. • Represent and interpret data. • Work with money.



Learning Targets-students will be able to;



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.*
3. Tell and write time in hours and half-hours using analog and digital clocks.
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.
5. Identify names and values of coins. Solve word problems involving dimes, nickels, and pennies, using ¢ symbol appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Assessment

- Formal and Informal Teacher Observations
- Formative checks for understanding and summative assessments
- Tests / Quizzes

Differentiation

- Hands-On Activities
- Diagnostic Assessment (based on content /skill pre-tests)
- Kinesthetic Activities
- Re-teach and Enrichment Activities
- Power Presentations (Activ Boards)
- Cooperative Learning (Flexible Grouping)
- Peer Tutoring
- Tiered Activities

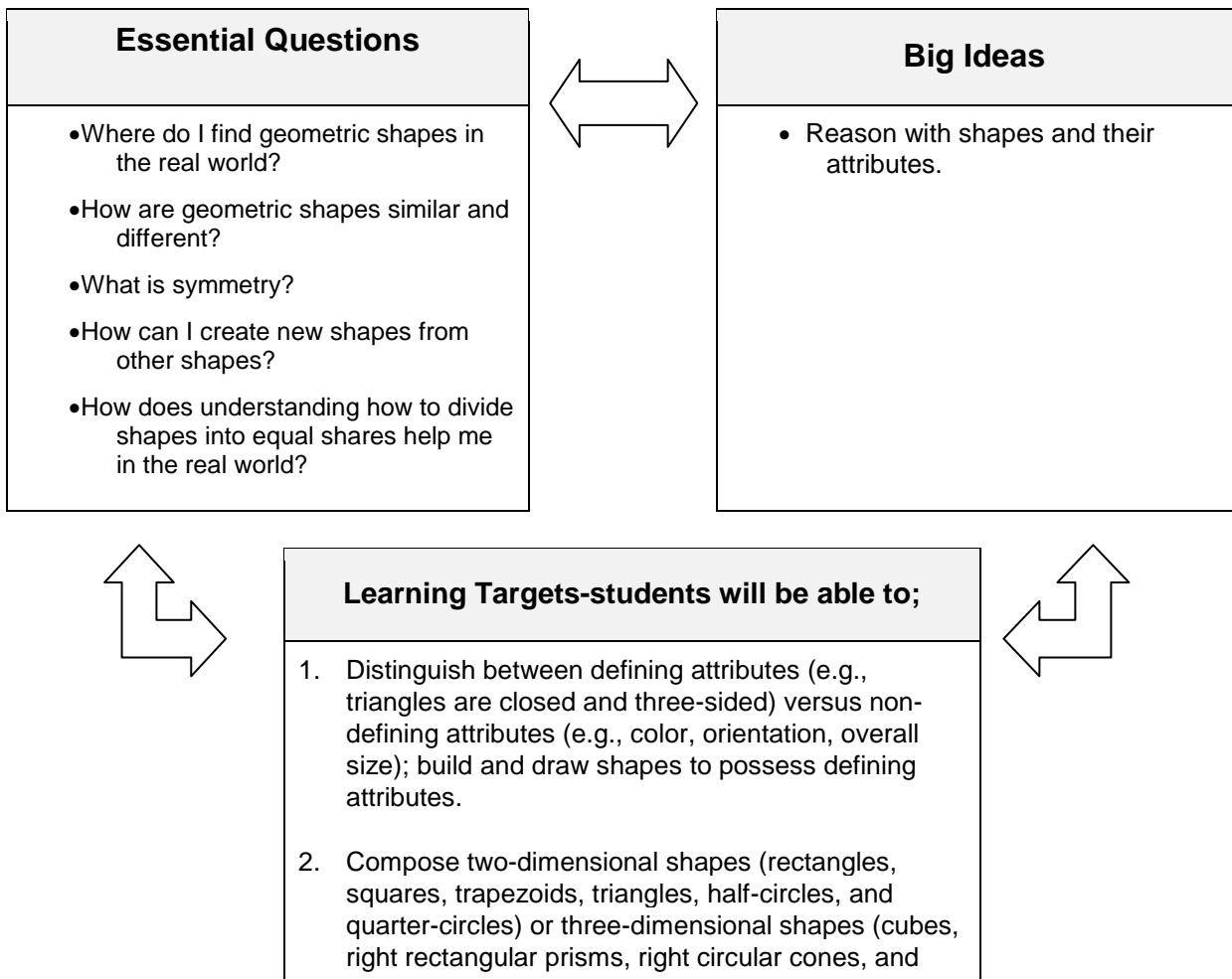
Stage 2: Backward planning: from the assessment to the learning activities through inquiry

Content Standards	
1.MD 1, 2, 3, 4 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8	
Approaches to Learning	
In this unit, students will acquire the knowledge to: <ul style="list-style-type: none"> • Understand and apply discrete and continuous measurement. 	
Learning Experiences	Teaching Strategies
<ul style="list-style-type: none"> • Course of study • Presentation of examples • Hands-on activities and use of manipulatives • Practice by homework • Cumulative review exercises • Test prep questions • Problem solving activities 	<ul style="list-style-type: none"> • Direct instruction • Differentiated instruction • Interdisciplinary activities • Cooperative learning activities • Reinforcement and remediation
Resources	

Grade 1 Math

Unit Title	Unit 4: Geometry
Time frame	1 marking period with ongoing reinforcement
21 st Century Themes	Critical Thinking and Problem Solving Communication and Collaboration ICT (Information, Communications and Technology) Literacy Flexibility and Adaptability Initiative and Self-Direction Productivity and Accountability
Interdisciplinary focus and technology integration	Art: Create designs using pattern blocks. Science: Use the sense of touch to determine the shape of an object. Technology: Draw line of symmetry on shapes posted on the interactive whiteboard.

Stage 1: Integrate essential questions, big ideas and learning targets, and ensure it can be differentiated and assessed



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.”)

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.

Assessment

- Formal and Informal Teacher Observations
- Formative checks for understanding and summative assessments
- Tests / Quizzes

Differentiation

- Hands-On Activities
- Diagnostic Assessment (based on content /skill pre-tests)
- Kinesthetic Activities
- Re-teach and Enrichment Activities
- Power Presentations (Activ Boards)
- Cooperative Learning (Flexible Grouping)
- Peer Tutoring
- Tiered Activities

Stage 2: Backward planning: from the assessment to the learning activities through inquiry

Content Standards

1.G 1, 2, 3
Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8

Approaches to Learning

In this unit, students will acquire the knowledge to:

- identify geometric shapes and their properties
- identify halves and fourths of a group

Learning Experiences

- Course of study
- Presentation of examples
- Hands-on activities and use of manipulatives
- Practice by homework
- Cumulative review exercises
- Test prep questions
- Problem solving activities

Teaching Strategies

- Direct instruction
- Differentiated instruction
- Interdisciplinary activities
- Cooperative learning activities
- Reinforcement and remediation

Resources