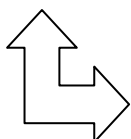
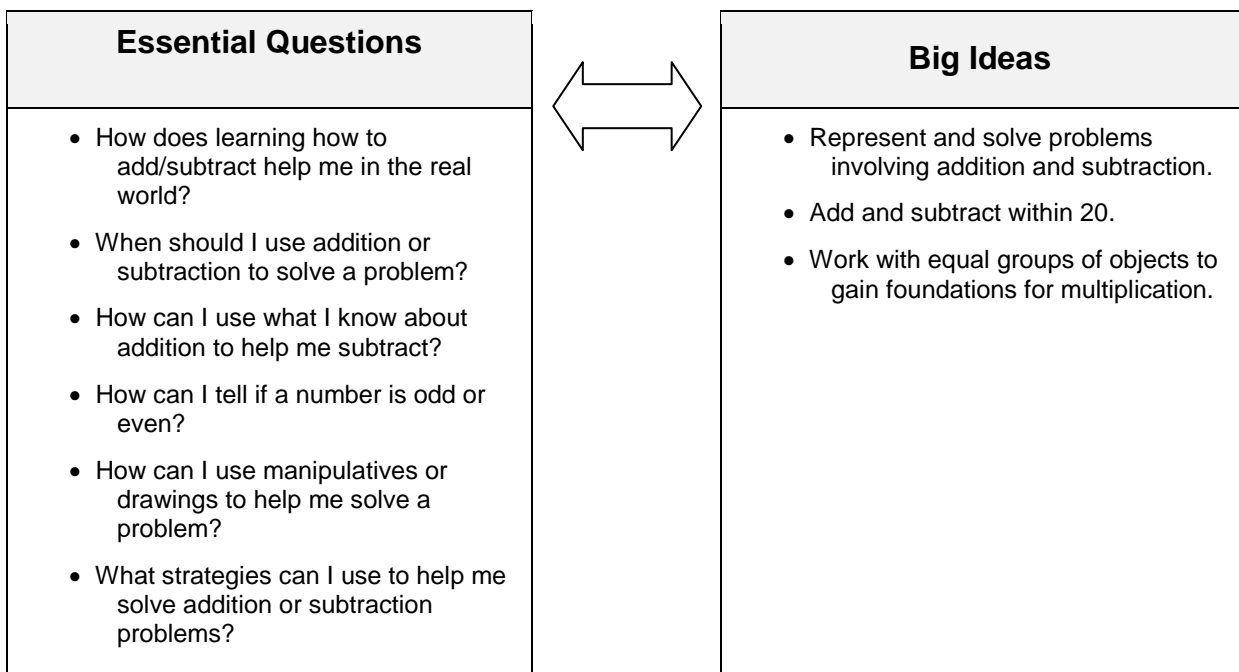


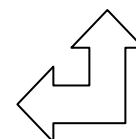
Grade 2 Math

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

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



Learning Targets-students will be able to;
1. 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, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (Explanations may be supported by drawings or objects.)

2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
3. 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.
4. 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.

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

2.OA 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:

- use addition and subtraction facts to 20
- add three or more numbers
- relate addition and subtraction facts
- add three two-digit numbers with and without regrouping
- add and subtract two- and three-digit numbers with and without regrouping
- use addition to check subtraction
- add and subtract money
- use arrays to write an addition equation
- make equal groups from a larger set

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

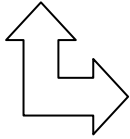
- Mathematics: The Path to Math Success (Grade 2). 2001: Silver Burdett Ginn, Inc.
- Touch Math Subtraction Kit Second Grade

Grade 2 Math

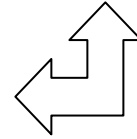
Unit Title	Unit 2: Number and Operations in Base Ten
Time frame	Second marking period with ongoing reinforcement.
21 st Century Themes	<p>Critical Thinking and Problem Solving</p> <p>Communication and Collaboration</p> <p>ICT (Information, Communications and Technology) Literacy</p> <p>Flexibility and Adaptability</p> <p>Initiative and Self-Direction</p> <p>Productivity and Accountability</p>
Interdisciplinary focus and technology integration	<p>Science: Use numbers when comparing the planets in our solar system.</p> <p>Technology: Use the internet to gather information for Nascar Math or other class projects involving larger numbers.</p> <p>Social Studies: Collect beverage can tabs, count them in an organized system, update new number at regular intervals, and at the end of the year donate them to charity.</p>

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"> •How does place value help me to understand and compare numbers? •How can we use the words before, after, and between to describe number order? •Why is it important to learn how to count and skip count? •How can I recognize patterns in numbers? •How does regrouping and understanding place value help me to add and subtract large numbers? •Why is zero important to our number system? •What strategies can I use to help me solve addition or subtraction problems? 	<ul style="list-style-type: none"> • Understand place value. • Use place value understanding and properties of operations to add and subtract.



Learning Targets-students will be able to;



1. 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).
2. Count within 1,000; skip-count by 5s, 10s, and 100s.
3. Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.
4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.
5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
6. Add up to four two-digit numbers using strategies based on place value and properties of operations.
7. 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.
8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
9. Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)

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

2.NBT 1, 2, 3, 4, 5, 6, 7, 8, 9

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

Approaches to Learning

In this unit, students will acquire the knowledge to:

- use place value to hundreds
- write, compare, and order numbers to 1,000
- skip count by 10s and 100s

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

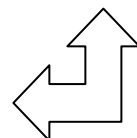
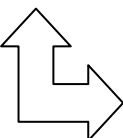
- Mathematics: The Path to Math Success (Grade 2). 2001: Silver Burdett Ginn, Inc.
- Touch Math Second Grade Sequence Counting/Multiplication Kit

Grade 2 Math

Unit Title	Unit 3: Measurement and Data
Time frame	Third 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/Technology: Use calculator cash registers and play money to play store. Science: Grow plants from beans and measure the growth. Language Arts/Social Studies: Read books about the history of money.

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 and bills help me in real life? •How does skip counting help me to count money? •What strategies can I use to help me measure, tell time, and count money? •How can I represent data on a line plot, pictograph, or bar graph? 	<ul style="list-style-type: none"> • Measure and estimate lengths in standard units. • Relate addition and subtraction to length. • Work with time and money. • Represent and interpret data.



Learning Targets-students will be able to;

1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2. 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.
3. Estimate lengths using units of inches, feet, centimeters, and meters.
4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
5. 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.
6. 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.
7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?
9. 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.
10. 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.

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

2.MD 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

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

Approaches to Learning

In this unit, students will acquire the knowledge to:

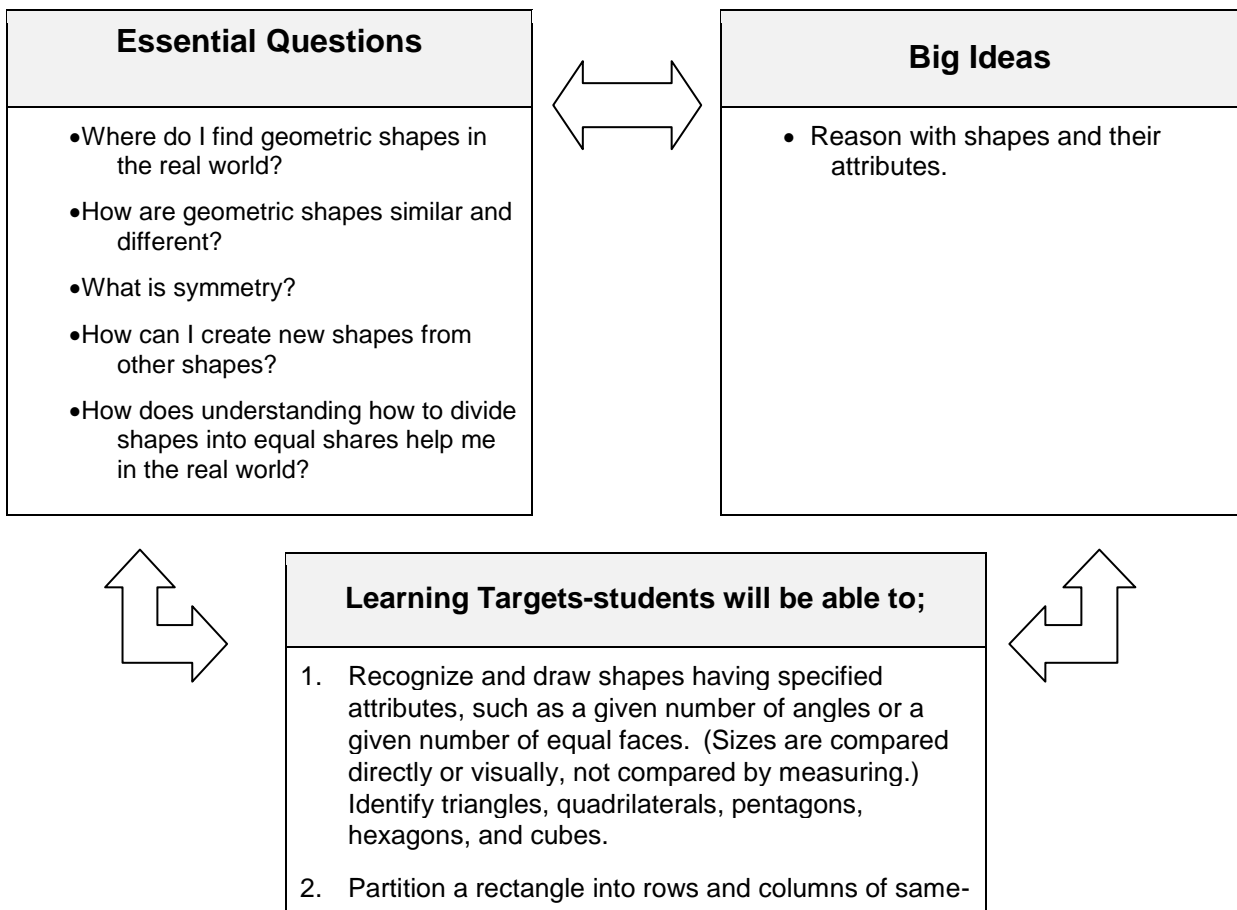
- measure length using inches, yards, centimeters, and meters
- skip count by 5s
- tell time on a clock to five-minute intervals
- determine elapsed time
- identify the value of sets of pennies, nickels, dimes, quarters, half dollars, and one-dollar bills
- count and write dollars and cents
- begin to make change
- make and read line plots, pictographs, and bar graphs

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	
<ul style="list-style-type: none"> • Mathematics: The Path to Math Success (Grade 2). 2001: Silver Burdett Ginn, Inc. • Touch Math Second Grade Sequence Counting/Multiplication Kit • Touch Money, PCI Educational Publishing • Real Life Math Series: Menu Math Classroom Pack Levels 1 & 2, Remedia Publications 	

Grade 2 Math

Unit Title	Unit 4: Geometry
Time frame	Fourth marking period.
21 st Century Themes	<p>Critical Thinking and Problem Solving</p> <p>Communication and Collaboration</p> <p>ICT (Information, Communications and Technology) Literacy</p> <p>Flexibility and Adaptability</p> <p>Initiative and Self-Direction</p> <p>Productivity and Accountability</p>
Interdisciplinary focus and technology integration	<p>Art: Identify shapes found in everyday pictures.</p> <p>Art: Create designs with pattern blocks and experiment with symmetry and tessellations.</p> <p>Science: Look for symmetry in nature.</p> <p>Social Studies: Look at flags from around the world. Use grid paper to copy and label a flag design that is based on equal parts.</p>

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



size squares and count to find the total number of them.

3. 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.

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

2.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:

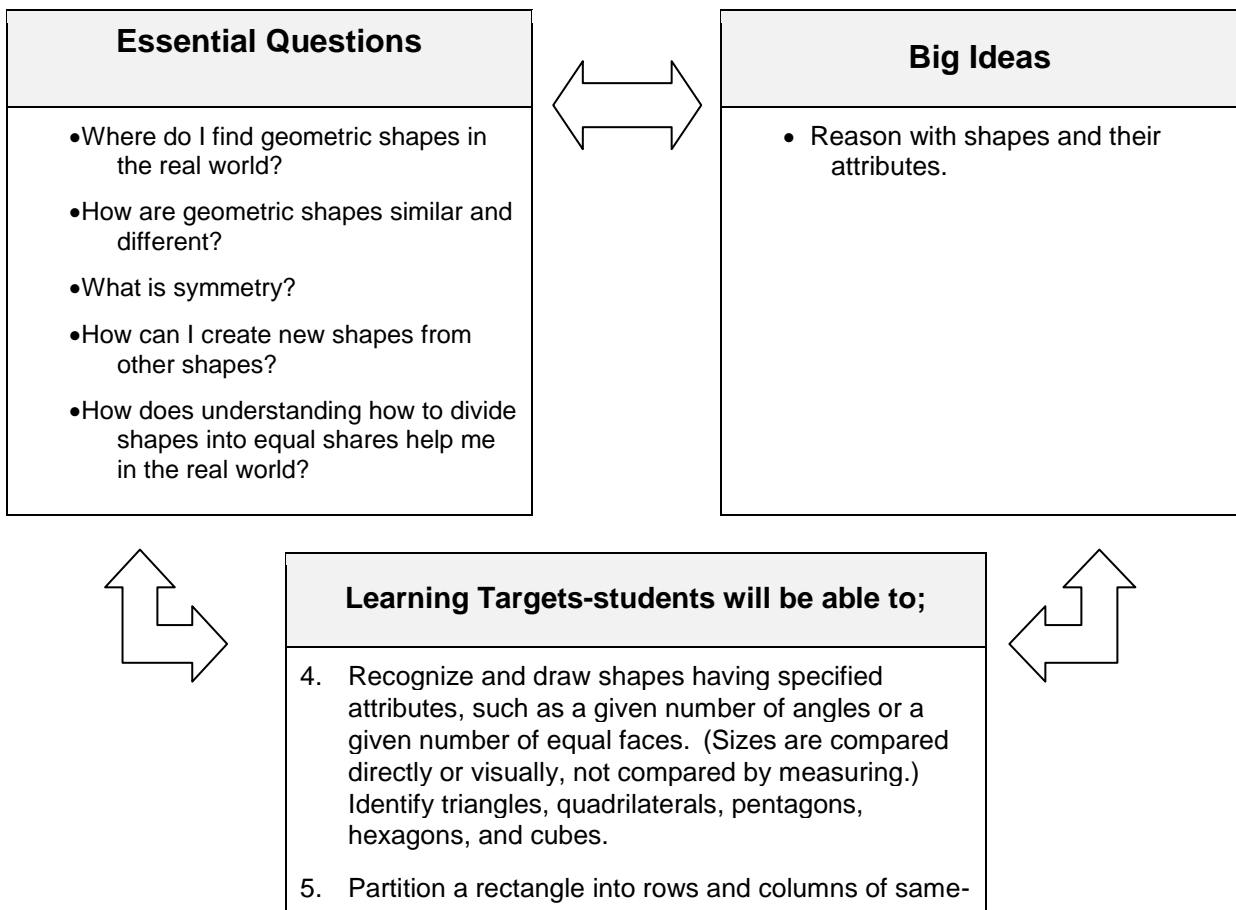
- identify geometric shapes and their properties
- find area by counting
- identify halves, thirds, and fourths of a group

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	
<ul style="list-style-type: none"> • Mathematics: The Path to Math Success (Grade 2). 2001: Silver Burdett Ginn, Inc. 	

Grade 2 Math

Unit Title	Unit 4: Geometry
Time frame	
21 st Century Themes	<p>Critical Thinking and Problem Solving</p> <p>Communication and Collaboration</p> <p>ICT (Information, Communications and Technology) Literacy</p> <p>Flexibility and Adaptability</p> <p>Initiative and Self-Direction</p> <p>Productivity and Accountability</p>
Interdisciplinary focus and technology integration	<p>Art: Identify shapes found in everyday pictures.</p> <p>Art: Create designs with pattern blocks and experiment with symmetry and tessellations.</p> <p>Science: Look for symmetry in nature.</p> <p>Social Studies: Look at flags from around the world. Use grid paper to copy and label a flag design that is based on equal parts.</p>

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



size squares and count to find the total number of them.

6. 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.

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

2.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
- find area by counting
- identify halves, thirds, and fourths of a group

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
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