Course Name:	Grade 2 Mathematics		
Description:	A comprehensive collection of Mathematics topics including: addition, subtraction, telling time, place value, money, graphing, and fractions.		
Academic Standards:	Wisconsin State Standards in Mathematics (2011)		
Units:	**Unit Length:**	**Unit Power Standards:**	**Unit Outcomes:**
Operations & Algebraic Thinking	4 Quarters	2.OA.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.	Students represent and solve problems with addition and subtraction and work with equal groups of objects to gain foundations for mulitplication. Addition and subtraction can be represented on various models. Numbers are composed of other numbers. Mental strategies help in solving problems quickly and accurately. There are different problem solving structures which can be used to solve problems in multiple ways. Flexible methods of computation involve grouping numbers in strategic ways. Even numbered objects can be modeled using pairs or rectangular arrays.
Number Base Ten	1 Quarter	2.NBT.3 Read and write numbers to 1,000 using base-ten numeral, number names, and expanded-form.	Students focus on understanding and using place value and the properties of operations to add and subtract. Numbers are composed of other numbers. Place value is based on groups of ten. Place value can be used to understand and model properties of operations. Number patterns repeat predictable and can be generalized and applied.
Measurement & Data	1 Quarter	2.MD.7 Tell and write time from analog and digital clocks to the nearest 5 minutes, using A.M. and P.M.	Students show time to the nearest 5 minutes using analog and digital clocks. We use measurement and data, telling time, and money in our everyday life.

Unit Name: **Operations & Algebraic Thinking**	**Length:** Four Quarters
Standards: I can fluently add & subtract within 10. I can fluently add & subtract within 20.	**Outcomes:** Addition and subtraction can be represented on various models. Numbers are composed of other numbers. Mental strategies help in solving problems quickly and accurately. There are different problem solving structures which can be used to solve problems in multiple ways. Flexible methods of computation involve grouping numbers in strategic ways. Even numbered objects can be modeled using pairs or rectangular arrays.
Essential Questions: What are some ways to think about addition and subtraction? What are strategies for finding addition and subtraction facts? Why do we have to know how to add and subtract quickly without mistakes? How can numbers be put together and taken apart to solve problems?	**Learning Targets:** 1. Students will add and subtract accurately and efficiently. 2. Students will be able to determine whether a group of objects is odd or even. 3. Students will be able to skip-count by 2s, 5s, 10s, and 100s.
Topic 1: **Fluent computation to add and subtract**	**Length:** ongoing
Standard(s): I can add and subtract using accuracy (correct answer) and efficiency (within 3-4 seconds).	**Academic Vocabulary:** addend, sum, difference, double
Lesson Frame: Addition & Subtraction within 10	I can add and subtract within 10.
Lesson Frame: Addition & subtractions within 20	I can add and subtract within 20.
Performance Tasks: Progress monitoring with flashcards 1:00 Math assessment	Notes: 0-9 facts flashcards 10-20 facts flashcards Teach double facts and Double plus 1
Topic 2: **Math Patterns**	**Length:** Ongoing
Standard(s): I can determine if a number is odd or even. I can use number patterns.	**Academic Vocabulary:** odd, even
Lesson Frame: Odd and Even Numbers	I can: determine if a number is odd or even.
Lesson Frame: Skip Counting	I can count by 2's to 100. I can count by 5's to 200. I can count by 10's to 200. I can count by 100's to 1,000.
Performance Tasks: Progress monitoring with flashcards 1:00 Math assessment orally recite skip counting patterns Completion of rubric	Notes: Activities may vary depending on individual needs. Various videos Dry erase math boards and other manipulatives

Unit Name: **Numbers & Operations Base 10**	**Length:** January through May
Standards: I can read numbers to 1,000 using base-ten numerals. I can read numbers to 1,000 using number names. I can read numbers to 1,000 using expanded-form. I can write numbers to 1,000 using base-ten numerals. I can write numbers to 1,000 using number names. I can write numbers to 1,000 using expanded-form. I can add and subtract 2-digit numbers using place value. I can add and subtract 3-digit numbers using place value.	**Outcomes:** Numbers are composed of other numbers. Place value is based on groups of ten. Place value can be used to understand and model properties of operations. Number patterns repeat predictable and can be generalized and applied.
Essential Questions: How can numbers to 100 be shown and compared? What number patterns are helpful in reading and writing numbers to 1,000? How does the position of a digit in a number affect its value? How do predictable patterns help me understand how number work? In what ways can numbers be composed or decomposed? What are efficient methods for finding sums and differences?	**Learning Targets:** 1. Students will compare numbers based on the value of the hundreds, tens, and ones digits, using >, <, and = symbols. 2. Students will read and write numbers to 1,000 using base-ten numerals, number names, and expanded form. 3. Students will fluently add and subtract within 1,000, using strategies based on place value.
Topic 1: **Reading numbers to 1,000**	**Length:** January through May
Standard(s): I can read numbers using base-ten numerals, number names, and expanded-form.	**Academic Vocabulary:** base-ten numerals, secret code cards, pattern, ones, tens, hundreds, thousands, decade numbers, expanded form, number name, greater than, less than, equal to
Lesson Frame: Base-ten numerals	I can: read numbers to 1,000 using base-ten numerals.
Lesson Frame: Number Names	I can: read numbers to 1,000 using number names.
Lesson Frame: Expanded-Form	I can: read numbers to 1,000 using expanded form.
Performance Tasks: Progress monitoring with flashcards 1:00 Math assessment	Notes: Activities may vary depending on individual needs. Various videos Dry erase math boards and other manipulatives Secret Code Cards
Topic 2: **Write Numbers to 1,000**	**Length:** January through May
Standard(s): I can write numbers using base-ten numerals, number names, and expanded-form.	**Academic Vocabulary:** base-ten numerals, secret code cards, pattern, ones, tens, hundreds, thousands, decade numbers, expanded form, number name, greater than, less than, equal to
Lesson Frame: Base-Ten Numerals	I can write numbers to 1,000 using base-ten numerals.

Lesson Frame: Number Names	I can write numbers to 1,000 using number names.
Lesson Frame: Expanded-Form	I can write numbers to 1,000 using expanded-form.
Performance Tasks: Progress monitoring with flashcards 1:00 Math assessment Completion of rubric	Notes: Activities may vary depending on individual needs. Various videos Dry erase math boards and other manipulatives Secret Code Cards
Topic 3: **Addition and Subtraction using Place Value**	**Length:** January through May
Standards(s): I can add numbers fluently without regrouping. I can add numbers fluently with regrouping. I can subtract numbers fluently without ungrouping. I can subtract numbers fluently with ungrouping.	**Academic Vocabulary:** sum, difference, ones, ten, hundreds, thousands, regroup, ungroup
Lesson Frame: Addition without regrouping	I can add numbers fluently without regrouping.
Lesson Frame: Addition with regrouping	I can add numbers fluently with regrouping.
Lesson Frame: Subtraction without ungrouping	I can subtract numbers fluently without ungrouping.
Lesson Frame: Subtraction with ungrouping	I can subtract numbers fluently with ungrouping.
Performance Tasks: Formal and informal assessment completion of rubric	Notes: Activities may vary depending on individual needs dry erase boards math manipulatives

Unit Name: **Measurement & Data**	**Length:** One Quarter
Standards: I can measure the length of an object with the correct tool. I can recognize and draw shapes with specific attributes. I can tell and write time using analog and digital clocks to the nearest 5 minutes. I can draw a picture graph and a bar graph with single unit scale to represent a data set with up to four categories. I can count quarters, dimes, nickels and pennies up to one dollar. I can solve word problems involving dollar bills, quarters, dimes, nickels and pennies using $ and cent symbols.	**Outcomes:** We use measurement and data, telling time, and money in our everyday life.
Essential Questions: What is the process for measuring length? How can bar graphs and pictographs be used to show data and answer questions? How do we tell time to 5 minutes? What strategies can be used to count money?	**Learning Targets:** 1. Students will measure the length of an object using units of inch, feet, centimeter, and meter. 2. Students will draw and identify shapes with specific attributes. 3. Students will use analog and digital clocks to tell time to the nearest 5 minutes. 4. Students will draw a picture graph to represent a data set with up to four categories. 5. Students will solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using symbols appropriately.
Topic 1: **Measuring Length**	**Length:** 2 weeks
Standard(s): I can measure the length of an object with the correct tool.	**Academic Vocabulary:** length, inch, foot, yard, centimeter, meter, ruler, horizontal, vertical, width, height
Lesson Frame: measure in inches with a ruler	I can measure objects in inches using a ruler accurately.
Lesson Frame: measure in feet with a ruler or yardstick	I can measure objects in feet with a yardstick.
Lesson Frame: measure in centimeters with a ruler	I can measure objects in cm with a ruler.
Performance Tasks: informal and formal assessment Completion of Rubric	Notes: Activities may vary depending on individual needs. Materials needed: Inch and Centimeter rulers
Topic 2: **Geometry**	**Length:** 2 weeks
Standard(s): I can recognize and draw shapes with specific attribute.	**Academic Vocabulary:** square, rectangle, triangle, quadrilateral, measure the length of an object with the correct tool, hexagon, opposite sides, rectangular prism, face, view, cube, angle, right angle, 2-D, 3-D

Lesson Frame: Identify Shapes: 2D and 3D, square, rectangle, triangle, quadrilateral, pentagon, hexagon, rectangular prism, cube	I can tell the name of 2-D and 3D shapes.
Lesson Frame: Draw 2-D and 3-D shapes with specific attributes; sides, opposite sides, angles, face, & view.	I can draw 2-D shapes with specific attributes. I can draw 3D shapes with specific attributes.
Performance Tasks: Formal and informal assessments Completion of Rubric	Notes: Activities may vary depending on individual needs. Materials needed: 3-D shapes, dry erase boards
Topic 3: **Telling Time to Nearest 5 minutes**	**Length:** 2 weeks
Standard(s): I can read and write the time on an analog and digital clock to the nearest five minutes.	**Academic Vocabulary:** clock, analog, digital, minute hand, hour hand, AM, PM
Lesson Frame: Tell time to Hour and Half Hour	I can tell time on analog and digital clocks to hour and half hour.
Lesson Frame: Tell time using Quarter after and Quarter to	I can tell time on analog clocks that represent quarter after and quarter to.
Lesson Frame: Tell time to the nearest 5 minutes	I can tell time on analog clocks and digital clocks to the nearest five minutes.
Lesson Frame: Determine if a time is AM or PM	I can tell if a time is AM or PM.
Performance Tasks: formal and informal assessment Completion of Rubric	Notes: Activities may vary depending on individual needs. Materials needed: clock manipulatives, dry erase boards
Topic 4: **Money**	**Length:** 2 weeks
Standard(s): I can identify and count quarters, dimes, nickels, and pennies. I can solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using symbols appropriately.	**Academic Vocabulary:** penny, nickel, dime, quarter, dollar
Lesson Frame: Identify and count quarters, dimes, nickels & pennies	I can identify and count coins within a dollar.
Lesson Frame: Solve word problems using dollars and coins	I can count coins and dollars. I can solve word problems related to counting coins and dollars.
Performance Tasks: Formal and informal assessment Completion of rubric	Notes: Activities may vary depending on individual needs. Materials needed: coin manipulatives, dry erase boards
Topic 5: **Represent and Interpret Data**	**Length:** 2 weeks

Standard(s): I can draw a picture graph and bar graph to represent data from a table. I can solve simple put-together, take-apart, and comparing problems using information presented in a bar graph.	**Academic Vocabulary:** picture graph, bar graph, data, table, horizontal, vertical, sort, survey, title, more, most, fewest, less, fewer, line segment, line plot
Lesson Frame: Picture Graphs and Bar Graphs	I can draw a picture graph and bar graph to represent data from a table.
Lesson Frame: Answer questions using a Bar Graph	I can put -together, take-apart, and compare numbers from a bar graph so solve simple problems.
Lesson Frame: Plot Lines	I can plot points on a line segment to represent data.
Performance Tasks: Formal and informal assessment Completion of rubric	Notes: Activities may vary depending on individual needs. Manipulatives- dry erase boards