Washington Township Public Schools
COURSE OF STUDY – CURRICULUM GUIDE

Course: Everyday Mathematics 4 – Grade 2

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Description:

Everyday Mathematics 4 is designed to teach the content required by the Common Core State Standards. In second grade, that content focuses on procedures, concepts, and applications in four critical areas:

- Understanding of base-10 notation
- Building fluency with addition and subtraction
- Using standard units of measure
- Describing and analyzing shapes

Throughout Everyday Mathematics, emphasized is placed on:

- Problem solving in everyday situations and mathematical contexts
- An instructional design that revisits topics regularly to ensure depth of knowledge and long-term learning
- Distributed practice through routines, games, and other activities
- Teaching that supports "productive struggle" and maintains high cognitive demand
- Lessons and activities that engage all children and make mathematics fun

Jack McGee: *Interim Assistant Superintendent for Curriculum & Instruction*
Gretchen E. Gerber: *Director of Elementary Education*
Cleve Bryan: *Interim Director of Secondary Education*

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BOE Approval:

DEMONSTRABLE PROFICIENCIES

COURSE TITLE: Everyday Mathematics 4 – Grade 2

I. CLASSWORK REQUIREMENTS

A.

II. ATTITUDE & BEHAVIOR

A.

III. COURSE OBJECTIVES/OVERVIEW

A. COURSE CONTENT

B. SKILLS

C. APPRECIATION OF CONCEPTS

IV. ATTENDANCE

Attendance: Refer to Board of Education Policy

V. GRADING PROCEDURES

A.

MAJOR UNITS OF STUDY

Course Title: Everyday Mathematics – Grade 2

I. **Establishing Routines**
II. **Fact Strategies**
III. **More Fact Strategies**
IV. **Place Value and Measurement**
IV. **Addition and Subtraction**
V. **Whole Number Operations and Number Stories**
VI. **Whole Number Operations and Measurement and Data**
VII. **Geometry and Arrays**
VIII. **Equal Shares and Whole Number Operations**

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 1 OVERVIEW** **Unit Title:** Establishing Routines

Unit Description and Objectives:

1-1 ***Numbers All Around*** - Students explore counts and represent whole numbers as lengths from 0 on a number line. Students will understand place value. Students will relate addition and subtraction to length.

1-2 ***Number Lines and Partnership Principles*** - Students practice partnership principles while solving addition and subtraction number stories and representing whole-number sums and differences on a number line. Students will add and subtract within 20. Students will understand place value. Students will relate addition and subtraction to length.

1-3 ***Math Tools*** – Students count tallies and calculate the values of coin combinations. Students will understand place value. Students will work with time and money.

1-4 ***Class Number Scroll*** – Students make a class number scroll from 0 to 1,000 using place-value strategies. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

1-5 ***Number-Grid Puzzles*** – Students use patterns to solve an open response problem. Students discuss selected solutions and explanations and revise their work. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

1-6 ***Equivalent Names for Numbers*** – Students use addition and subtraction to write equivalent names for numbers. They reinforce place-value concepts by skip counting on calculators. Students will add and subtract within 20. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

1-7 ***Playing Fishing for 10*** – Students build fact fluency by finding combinations of 10. Students will all and subtract within 20. Students will understand place value.

1-8 ***My Reference Book, Quarters, and Math Boxes*** – Students investigate *My Reference Book* and are introduced to the quarter and Math Boxes. Students will understand place value. Students will work with time and money.

1-9 ***Even and Odd Number Patterns*** – Students explore even and odd numbers using concrete and visual models. Students will work with equal groups of objects to gain foundations for multiplication.

1-10 ***Skip-Counting Patterns*** – Students skip count on calculators and number grids and look for place-value patterns in their counts. Students will understand place value.

1-11 ***Comparing Numbers and Home Links*** – Students discuss the meaning of the <, >, and = symbols and use the symbols to record comparisons of numbers, money amounts, and addition and subtraction expressions. Students will add and subtract within 20. Students will understand place value. Students will work with time and money.

1-12 ***Exploring Base-10 Blocks, Area, and Dominoes*** – Students count by 100s and 10s to find the value of base-10 “buildings”, use shapes to cover rectangles, and sort dominoes according to the number of dots. Students will add and subtract within 20. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract. Students will reason with shapes and their attributes.

1-13 ***Unit 1 Progress Check*** -Assess students’ progress of mathematical content of Unit 1 using Self Assessment, Written Assessment, and Open Response Assessment.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. What number patterns are helpful in reading and writing numbers to 1,000?	1. Numbers can be counted and sequenced on a number line. Number lines and number grids can help with skip counting.	1.1 What strategies can be used to continue a numerical sequence? 1.2 Where can you find patterns in math? 1.3 Why is it important to know how to find patterns in mathematics? 1.4 Why are patterns important in math?
2. What strategies can be used to count money?	2. Specific coins or bills each have a unique value. The size of a coin does not indicate its value. Money amounts can usually be counted in different ways. When counting money, it is usually easier to start with the coin or bill with the greatest value. The amount of money can often be represented using different combinations of coins and bills.	2.1 Why is it important to be able to count amounts of money? 2.2 What are the different ways to represent an amount of money? 2.3 How do you know if you have enough money to buy something?
3. How can sums be found mentally?	3. Combinations of 10 will develop mental strategies for solving addition facts.	3.1 What is mental math? 3.2 What strategies will help me add numbers quickly and accurately? 3.3 Why would these strategies be useful in everyday activities?
4. How do you know if a group of objects has an odd or even number of members?	4. Even numbers are the sum of two equal addends.	4.1 How do I figure out if a number is odd or even? 4.2 Why is the sum of two even numbers an even number?
5. How can numbers to 100 be shown and compared?	5. Place value can be used to compare and order numbers	5.1 Why should I understand place value? 5.2 What are the different ways to represent a number? 5.3 What is the difference between place and value? 5.4 How do I use place value to compare two or more numbers?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Counting and number sequences on a number line, number grid and number scroll.

Sub-Concept/Topics:

Counting combinations of coins to practice skip counting and understanding place-value concepts

Sub-Concept/Topics:

Practice creating equivalent names for numbers

Theme:

Establishing Routines

Conceptual Lens:

See pages 44 – 55 in Teacher's Lesson Guide

Sub-Concept/Topics:

Review and practice finding combinations of 10

Sub-Concept/Topics:

Explore the concept of Even and Odd Number Patterns

Sub-Concept/Topics:

Comparing Numbers Using <, >, and =

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 – Grade 2
Unit Number/Title: **Unit 1 Establishing Routines**
Conceptual Lens: Establishing Routines
Appropriate Time Allocation (# of Days)**:** 15 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
2.NBT.2	2.NBT.3	2.NBT.4	2.NBT.5
2.MD.6	2.MD.8	2.OA.2	2.OA.3

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
In Unit 1 students will work in an active, collaborative environment to learn both mathematics content and mathematics practice. Student learning will focus on: • Operations and Algebraic Thinking (Add and Subtract within 20) • Number and Operations in Base Ten (Understanding place value) • Measurement and Data (Working with time and money) Unit 1 focuses on the following concepts: • Number Lines • Coins • Number Grids and Number Scrolls • Quick Look Routines	• How to count and sequence numbers on a number line. • Coins represent different values • Number grids can help with pattern recognition and place-value concepts • Equivalent names for numbers can be expressed in a variety of ways • Combinations of 10 will develop mental strategies for solving addition facts • Even numbers are the sum of	1.1 Explore counts and represent whole numbers as lengths from 0 on a number line. 1.2 Practice partnership principles while solving addition and subtraction number stories and representing whole-number sums and differences on a number line. 1.3 Count tallies and calculate the values of coin combinations. 1.4 Make a class scroll from 0 to 1,000 using place-value strategies. 1.5 Day 1: Use patterns to solve and open response problem. Day 2: Discuss selected solutions and explanations and revise their work. 1.6 Use addition and subtraction to write equivalent names for numbers. Reinforce place-value concepts	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 1* pages 56 – 137 for lesson activities • Include Math Stations to assist struggling and advanced learners **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather Routine and Temperature Routine. **ELA 1.1 – 1.13**	See page 46 of Teacher's Lesson Guide for instruction materials per lesson. • Math Masters • Activity Cards 1 - 19 • Class Number Line • Class Number-Line Poster • Number cards • Dice • Toolkit coins • Pattern-Block Template • Scissors • Glue • Tape • Index cards • Slate • Crayons • Quick Look Cards • Calculator • Counters • Everything Math Deck • *My Reference Book*	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math and Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR • Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Equivalent Names for Numbers • Combinations of 10 • Even and Odd Number Patterns • Comparing Numbers Using <, >, and =	two equal addends • Numbers can be compared and contrasted	by skip counting on calculators. 1.7 Build fact fluency by finding combinations of 10. 1.8 Investigate *My Reference Book* and be introduced to the quarter and Math Boxes. 1.9 Explore even and odd numbers using concrete and visual models. 1.10 Skip count on calculators and number grids and look for place-value patterns in their counts. 1.11 Discuss the meaning of the <, >, and = symbols and use the symbols to record comparisons of numbers, money amounts, and addition and subtraction expressions. 1.12 Count by 100s and 10s to find the value of base-10 "buildings", use shapes to cover rectangles, and sort dominoes according to the number of dots. 1.13 Day 1 - Demonstrate skills learned in Unit 1 through a Self Assessment and Unit Assessment. Day 2 – Demonstrate skills learned in Unit 1 by	*Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.* **ELA - 1.3** TM 69. *Lots of Ladybugs! Counting by Fives*, by Michael Dahl, Picture Window Books, 2005 **Social Studies – 1.4** TM 78. Students will work in small groups to create a class scroll from separate number grids. **Technology – 1.6** – TM 93 - 94. Students count on a calculator and solve broken-calculator problems. **ELA – 1.8** TM 104. Students review text features in *My Reference Book.* **ELA - 1.9** TM 109. *Even Steven and Odd Todd,* by Kathryn Cristaldi, Scholastic Inc., 1996 **Technology – 1-10** TM 117. Students will skip count with a calculator. Additional Literature Links:	• Class Data Pad • Quarter-sheet of Paper	synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		completing an Open Response Assessment	http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf .		nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment Activities	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 1 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 1 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 1 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 1-1 Ordering Numbers (Activity Card 1) 1-2 Hopping on a Number Line (TM p. 63) 1-3 Counting Pennies with Tally Marks (TM p. 69) 1-4 Counting on the Number Grid (TM p. 75) 1-5 See Lesson 5 1-6 Playing *Two-Fisted Penny Addition* (Activity Card 6) 1-7 *Penny Plate* (TM p. 97) 1-8 Playing *The Exchange Game* with Pennies, Nickels, and Dimes (Activity Card 11) 1-9 Dividing Groups in Half (TM p. 109) 1-10Counting by 2s, 5s, and 10s (TM p.115) 1-11Using Weight to Illustrate Equalities and Inequalities (TM p. 121) 1-12Counting by 100s and 10s (TM p. 127)	Enrichment 1-1 Solving Number-line Puzzles (TM p. 57) 1-2 Making a Number Line (Activity Card 3) 1-3 Finding Equivalent Coins (Activity Card 4) 1-4 Making Number Scrolls (Activity Card 5) 1-5 See Lesson 5 1-6 Solving Calculator Place-Value Puzzles (Activity Card 7) 1-7 *Fishing for 100* (Activity Card 9) 1-8 *Quarter-Dime-Nickel-Penny Grab* (Activity Card 12) 1-9 Even and Odd Numbers (Activity Card 13) 1-10Solving Calculator-Count Problems (TM p. 115) 1-11*Number Top-it* (Activity Card 15) 1-12Examining the Domino Sort (TM p. 127)	1-1 Use Total Physical Response (TPR) technique (TM p. 57) 1-2 Include the following conventional English phrases used in partnership activities: It's my turn; Let's take turns; Let's share; Good work; Good thinking; Good job. 1-3 Identify and label common classroom objects (slates, toolkits and Pattern-Block Templates). (TM p. 69) 1-4 Introduce the word *pattern* by showing examples of simple patterns and examples that are not patterns. 1-5 See Lesson 5 1-6 Introduce the word *broken*, contrast examples of unbroken and broken objects. (TM p. 91) 1-7 Say, write and model the following game actions for *Fishing for 10*: Shuffle the cards; Turn over the cards; Turn the card face-side up; Turn the card face-side down; Go fish; Draw one more. 1-8 Introduce the word *quick* to show expectations of a quick response to the cards flashed in the Quick Looks routine. (TM p. 103) 1-9 Determine English Language Learners' understanding of the terms even numbers and odd numbers (TM p. 109) 1-10Introduce the term *skip* as "to jump over and omit something" (TM p. 115) 1-11Provide English Language Learners' with visual aids for the key math terms in the lesson. (TM. 121)	Readiness Activities 1-1 Ordering Numbers (Activity Card 1) 1-2 Hopping on a Number Line (TM p. 63) 1-3 Counting Pennies with Tally Marks (TM p. 69) 1-4 Counting on the Number Grid (TM p. 75) 1-5 See Lesson 5 1-6 Playing *Two-Fisted Penny Addition* (Activity Card 6) *1-7 Penny Plate* (TM p. 97) *1-8* Playing *The Exchange Game* with Pennies, Nickels, and Dimes (Activity Card 11) *1-9* Dividing Groups in Half (TM p. 109) 1-10Counting by 2s, 5s, and 10s (TM p.115) 1-11Using Weight to Illustrate Equalities and Inequalities (TM p. 121) 1-12Counting by 100s and 10s (TM p. 127)

		1-12Exploration A – display pictures of various buildings to show the word *building* can describe many types of structures. (TM p. 127)	
Extra Practice 1-1 Counting on a Number Line (Activity Card 2) 1-2 Working with a Partner to Solve Number Stories (TM 63) 1-3 Counting by Fives in Literature (TM 69) 1-4 Practicing with a Number Grid (TM p. 75) 1-5 1-6 Finding Equivalent Names (Activity Card 8) 1-7 *Turning Over 10* (Activity Card 10) 1-8 More Practice with Math Boxes (TM p 103) 1-9 Finding Even and Odd Numbers in Literature (TM 109) 1-10Skip Counting (Activity Card 14) 1-11Using <, >, and = (Activity Card 16) 1-12Finding Equivalent Names (Activity Card 8)		**Unit 1 Vocabulary:** combinations of 10; cube; equivalent names; even numbers; Explorations; flat; long; Math Boxes; Math Message; multiple of 10; nickel; number grid; number line; number scroll; odd number; pattern; quarter	Extra Practice 1-1 Counting on a Number Line (Activity Card 2) 1-2 Working with a Partner to Solve Number Stories (TM 63) 1-3 Counting by Fives in Literature (TM 69) 1-4 Practicing with a Number Grid (TM p. 75) 1-5 1-6 Finding Equivalent Names (Activity Card 8) 1-7 *Turning Over 10* (Activity Card 10) 1-8 More Practice with Math Boxes (TM p 103) 1-9 Finding Even and Odd Numbers in Literature (TM 109) 1-10Skip Counting (Activity Card 14) 1-11Using <, >, and = (Activity Card 16) 1-12Finding Equivalent Names (Activity Card 8)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 2 OVERVIEW** **Unit Title:** Fact Strategies

Unit Description and Objectives:

2-1 ***Grouping by 10s*** – Students explore place-value concepts as they play *The Exchange Game* with money and practice grouping by 10s using $1, $10, and $100 bills. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract. Students will work with time and money.

2-2 ***Addition Number Stories*** – Students write and solve addition number stories. Students will represent and solve problems involving addition and subtraction. Students add and subtract within 20.

2-3 ***Doubles and Combinations of 10*** – Students explore doubles and combinations of 10 to build fact fluency. Students will add and subtract within 20.

2-4 ***The Making-10 Strategy*** – Students use a strategy based on place value to add within 20. Students will add and subtract within 20. Students use place value understanding and properties of operations to add and subtract.

2-5 ***The Near-Doubles Strategy*** – Students use the near-doubles strategy to solve addition facts. Students will add and subtract within 20. Students will use place value understanding and properties of operations to add and subtract.

2-6 ***The Turn-Around Rule for Addition*** – Students use dominoes to explore the turn-around rule for addition. Students will add and subtract within 20. Students will use place value understanding and properties of operations to add and subtract.

2-7 ***Subtraction and the Turn-Around Rule*** – Day 1 – Students solve an open response problem by writing number stories and models. Day 2 – Students discuss solutions and revise their work. Students will represent and solve problems involving addition and subtraction. Students add and subtract within 20. Students use place value understanding and properties of operations to add and subtract.

2-8 ***Exploring Addition Tools, Odd and Even Patterns, and Shapes*** – Students explore counting up, odd and even numbers, and shapes. Students will work with equal groups of objects to gain foundations for multiplication. Students will use place value understanding and properties of operations to add and subtract. Students will reason with shapes and their attributes.

2-9 ***Even Numbers and Equal Addends*** – Students identify even and odd numbers, and they write number models to express even and odd numbers as sums. Students will add and subtract within 20. Students will work with equal groups of objects to gain foundations for multiplication.

2-10 ***Name-Collection Boxes*** - Students generate equivalent names for numbers and write them in name-collection boxes. Students will add and subtract within 20. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

2-11 ***Playing Name That Number*** – Student find many ways to name numbers. Students will add and subtract within 20. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

2-12 ***Frames and Arrows*** – Students skip count, add, and subtract to solve Frames-and-Arrows problems. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

2-13 ***Unit 2 Progress Check*** - Assess students' progress of mathematical content of Unit 2 using Self Assessment, Unit Assessment, and Cumulative Assessment.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. What are strategies for finding addition facts?	1. Doubles facts can be associated with memorable real-world situations. Basic addition facts that are near doubles can be found using a related doubles fact. Addition facts involving 9 can be changed to an equivalent fact with 10. Addition facts involving 8 can be changed to an equivalent fact with 10. Two numbers can be added in any order.	1.1 Can we change the order of numbers when we add (or subtract)? Why or why not? 1.2 How do I use the properties of addition to simplify problems involving numbers? 1.3 How can double facts help in solving addition and subtraction problems? 1.4 How can you use a doubles fact to solve a near doubles problem?
2. How do you know if a group of objects has an odd or even number of members?	2. Odd or even numbers can be recognized by counting a group and comparing them.	2.1 How are even and odd numbers different? 2.2 How does the ones digit help to tell if a number is even or odd? 2.3 How can you show odd or even within a group of objects?
3. How do you find different equivalent names for numbers?	3. Equivalent names for numbers help with learning basic addition and subtraction facts.	3.1 How might we represent the same number in different way? 3.2 Why is it useful for us to be able to represent the same number differently? 3.3 How can decomposing a number help you learn basic addition facts?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Write and solve number stories and represent the stories with drawings and number models.

Sub-Concept/Topics:

Count collections of $100, $10, and $1 bills. Make exchanges among bills to illustrate that a $10 bill has the same value as ten $1 bills, and a $100 bill has the same value as $10 bills.

Sub-Concept/Topics:

Utilize the Quick Looks routine to help children solidify their knowledge of addition facts. Use doubles and combinations of 10 as "helper facts" to help students solve other facts.

Introduce the Frame-and-Arrows routine which provides ongoing practice that allows children to "create and justify rules, shortcuts, and generalizations."

Theme:

Fact Strategies

Conceptual Lens:

See pages 138 – 149 in Teacher's Lesson Guide

Sub-Concept/Topics:

Discover the Commutative Property of Addition rule by examining related pairs of addition facts shown on double-9 dominoes.

Sub-Concept/Topics:

Build on an understanding of even and odd numbers and connect even numbers to doubles facts.

Sub-Concept/Topics:

Create and identify equivalent names for numbers in order to provide practice with basic facts and help children see number flexibility, which provides a foundation for later development of addition and subtraction strategies.

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 – Grade 2
Unit Number/Title: Unit 2 – Fact Strategies
Conceptual Lens: Fact Strategies
Appropriate Time Allocation (# of Days)**:** 15 Days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
2.NBT.1	2.NBT.2	2.NBT.3	2.NBT.5
2.NBT.7	2.NBT.9	2.OA.1	2.OA.2
2.OA.3	2.MD.6	2.MD.8	2.G.1, 2.G.3

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
In Unit 2 students will review and extend their understanding of fact strategies and program routines from *First Grade Everyday Mathematics*. Students will have frequent experiences with these strategies and routines to prepare children to now from memory all sums of two 1- digit numbers by the end of the year. Student learning will focus on: • Operations and Algebraic Thinking (Add and subtract within 20) • Number and Operations in Base Ten (Use place value understanding and properties of operations to add and subtract. Unit 2 focuses on the following Topics/Concepts: • Place value	• The value of a number is determined by its place value • To write and solve number stories and represent the stories with drawings and number models • Number stories provide practice with facts and multi-digit computation • The Commutative Property of Addition will help develop automatic recall of addition facts • Doubles facts always have an even sum • Equivalent names for numbers develops number flexibility and practice with basic facts	**2-1** Explore place-value concepts as they play *The Exchange Game* with money and practice grouping by 10s using $1, $10 and $100 bills. **2-2** Write and solve addition number stories. **2-3** Explore doubles and combinations of 10 to build fact fluency. **2-4** Use a strategy based on place value to add within 20. **2-5** Use the near-doubles strategy to solve addition facts. **2-6** Use dominoes to explore the turn-around rule for addition. **2-7** Day 1 – Solve an open response problem by writing number stories and models. Day 2 – Discuss solutions and review their work. **2-8** Explore counting up, odd and even numbers, and shapes.	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 1* pages 150 - 231 for lesson activities • Include Math Stations to assist struggling and advanced learners **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather Routine and Temperature Routine. **ELA 2.1 – 2.13** *Teacher models and reviews key vocabulary terms.*	See page 140 of Teacher's Lesson Guide for instruction materials per lesson. • Toolkit bills • 6 sided dice • Activity Cards 6, 19-34 • Quick Look Cards • Number cards 0-10 • Counters • Calculator • Toolkit coins • Dominoes • Scissors • Envelope • Paper clip • Rubber band • Slate • Craft stick • Class Data Pad • Green and blue crayons • Picture frame and glasses • Pattern-Block Template	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math and Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Number Stories • Helper Facts • The Commutative Property of Addition • Even and Odd Numbers • Equivalent Names for Numbers • Frames and Arrows	• Identifying patterns in numbers helps solve problems and completes a sequence	**2-9** Identify even and odd numbers. Write number models to express even and odd numbers as sums. **2-10** Generate equivalent names for numbers and write them in name-collection boxes. **2-11** Find many ways to name numbers. **2-12** Skip count, add, and subtract to solve Frames-and-Arrows problems. **2-13** Day 1 – Demonstrate skills learned in Unit 2 by competing a Self Assessment and Unit Assessment. Day 2 – Demonstrate skills learned in Unit 2 by completing a Cumulative Assessment.	*Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.* **ELA 2-3** – TM 163. *Two of Everything: A Chinese Folktale* by Lily Toy Hong. **Technology 2.3** – TM163. Student will make doubles with a calculator **ELA 2-9 -** TM 201. *One Odd Day* and *My Even Day* by Doris Fischer (Sylvan Dell Publishing, 2007) Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf		synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support,
*See Unit 2 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 2 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 2 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 2-1 Playing *The Exchange Game* with Pennies and Nickels (TM 151) 2-2 Putting Groups Together (TM 157) 2-3 Representing Doubles (TM 163) 2-4 Playing *Two-Fisted Penny Addition* (Activity Card 6) 2-5 *Roll and Record Doubles* (TM 175) 2-6 Recognizing Numbers on a Domino (TM 181) 2-8 Using a Ten Frame to Find Even and Odd Numbers (TM 195) 2-9 Using a Ten Frame to Find Even and Odd Numbers (TM 201) 2-10 Playing *Two-Fisted Penny Addition* (Activity Card 10) 2-11 Sorting Dominoes (Activity Card 19) 2-12 Counting Patterns on a Number Line (TM 219)	**Enrichment** 2-1 Finding Combinations of 100 (Activity Card 20) 2-2 Creating Addition Number Stories (Activity Card 21) 2-3 Making Doubles with a Calculator (Activity Card 22) 2-4 Exploring the Addition Facts Table (TM 169) 2-5 Using Helper Doubles Facts with Larger Numbers (TM 175) 2-6 Checking the Turn-Around Rule with Larger Numbers (TM181) 2-8 Dividing Shapes (TM 195) 2-9 Even and Odd Addends (Activity Card 30) 2-10 Many Names for Numbers (Activity Card 31) 2-11 Writing Number Sentences for *Name That Number* (TM 213) 2-12 Two-Rule Frames and Arrows (Activity Card 33)	*See Readiness Activities and Extra Practice Activities 2-1 Pair an English Language Learner with an English-proficient partner to review directions. Have explanatory visuals for each direction. 2-2 Use Journal page 19 and questions on TM pg 157 to prepare children for writing number stories. 2-3 Introduce the term *doubles* by making connections to everyday experiences. 2-4 Build on classroom experiences to explain the meaning of the word *helper*. 2-5 Illustrate the meaning of the word *near*. 2-6 Teach children to use *turn around* to mean switching or exchanging places. 2-8 Help children connect the words in a number story to the symbols in a number model. 2-9 Build on children's knowledge of the term *add* to introduce the word *addend*. 2-10 Illustrate a *name-collection box* by discussing different names for *mom*. 2-11 Use Total Physical Response routine to let children rehearse the action of shuffling cards. Introduce the meaning of: • It's your turn. • It's my turn. • Who is next? • You win. 2-12 Introduce the term *rule* and the phrase *follow the rule*.	**Readiness Activities** 2-1 Playing *The Exchange Game* with Pennies and Nickels (TM 151) 2-2 Putting Groups Together (TM 157) 2-3 Representing Doubles (TM 163) 2-4 Playing *Two-Fisted Penny Addition* (Activity Card 6) 2-5 *Roll and Record Doubles* (TM 175) 2-6 Recognizing Numbers on a Domino (TM 181) 2-8 Using a Ten Frame to Find Even and Odd Numbers (TM 195) 2-9 Using a Ten Frame to Find Even and Odd Numbers (TM 201) 2-10 Playing *Two-Fisted Penny Addition* (Activity Card 10) 2-11 Sorting Dominoes (Activity Card 19) 2-12 Counting Patterns on a Number Line (TM 219)

Extra Practice Activities 2-1 Playing *Spinning For Money* (TM 151) 2-2 Writing an Addition Number Stories (TM 157) 2-3 Finding Doubles in Literature (Activity Card 23) 2-4 Using Ten Frames to Make 10 (TM 169) 2-5 Near-Doubles Strategy (Activity Card 24) 2-6 The Turn-Around Rule (Activity Card 25) 2-8 Looking for Doubles (Activity Card 29) 2-9 *One Odd Day* and *One Even Day* (TM 201) 2-10 Creating Name-Collection Boxes (Activity Card 32). 2-11 Practicing with *Name That Number* (TM 313) 2-12 Frames-and-Arrows Problems (Activity Card 34)		**Unit 2 Vocabulary:** addend; addition number story; arrow; arrow rule; combinations of 10; divide; doubles; doubles facts; equal addends; equivalent; fourths; frame; Frame and Arrow Diagram; half; halves; helper fact; label; making 10; name-collection box; near-doubles strategy; number model; number sentence; number story; sum; total; trade; turn-around rule; unit box	**Extra Practice Activities** 2-1 Playing *Spinning For Money* (TM 151) 2-2 Writing an Addition Number Stories (TM 157) 2-3 Finding Doubles in Literature (Activity Card 23) 2-4 Using Ten Frames to Make 10 (TM 169) 2-5 Near-Doubles Strategy (Activity Card 24) 2-6 The Turn-Around Rule (Activity Card 25) 2-8 Looking for Doubles (Activity Card 29) 2-9 *One Odd Day* and *One Even Day* (TM 201) 2-10 Creating Name-Collection Boxes (Activity Card 32). 2-11 Practicing with *Name That Number* (TM 313) 2-12 Frames-and-Arrows Problems (Activity Card 34)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 3 OVERVIEW** **Unit Title:** More Fact Strategies

Unit Description and Objectives:

3-1 ***Using Addition Strategies*** – Day 1 – Students solve an open response problem using their own fact strategies. Day 2 – The class discuss selected drawings and explanations, and children revise their work. Students will add and subtract within 20.

3-2 ***Strategies from Addition: Think Addition*** – Students write subtraction number stories and generate related addition and subtraction facts. Students will represent and solve problems involving addition and subtraction. Students will add and subtract within 20. Students will use place value understanding and properties of operations to add and subtract.

3-3 ***Fact Families*** – Students generate fact families using related numbers on Fact Triangles. Students will add and subtract within 20. Students will use place value understanding and properties of operations to add and subtract.

3-4 ***Playing Salute!*** – Students play *Salute!* to find missing addends. Students will add and subtract within 20. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

3-5 ***Subtraction Strategies: Counting Up and Counting Back*** – Students discuss and use the counting-up and counting-back strategies for subtraction. Students will add and subtract within 20.

3-6 ***-0 and -1 Fact Strategies and Subtraction Top-It*** – Students explore the -0 and -1 fact strategies and play *Subtraction Top-It.* Students will add and subtract within 20. Students use place value understanding and properties of operations to add and subtract.

3-7 ***"What's My Rule?"*** – Students find missing numbers and missing rules in "What's My Rule?" problems. Students will represent and solve problems involving addition and subtraction. Students use place value understanding and properties of operations to add and subtract.

3-8 ***Using Doubles to Subtract*** – Students use doubles to solve subtraction facts. Students will represent and solve problems involving addition and subtraction. Students will add and subtract within 20.

3-9 ***Going-Back-Through-10 Strategy for Subtraction*** - Students use the going-back-through-10 strategy for subtraction. Students will represent and solve problems involving addition and subtraction. Students will add and subtract within 20. Students will relate addition and subtraction to length.

3-10 ***Going-Up-Through-10 Strategy for Subtraction*** – Students use the going-up-through-10 strategy for subtraction. Students will add and subtract within 20. Students will relate addition and subtraction to length.

3-11 ***Exploring Rectangles, Fact Wheels, and Coins*** – Students cover rectangles with squares, practice addition and subtraction facts on a fact wheel, and make coin stamp booklets. Students will add and subtract within 20. Students will work with time and money. Students will reason with shapes and their attributes.

3-12 ***Unit 3 Progress Check*** – Day 1 – Administer the Unit Assessments Day 2 – Administer the Open Response Assessment

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. What are strategies for finding subtraction facts?	1. Addition and subtraction have an inverse relationship. The inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has a related addition fact.	1.1 How can addition help us know if we subtracted correctly? 1.2 How can we write related addition facts? 1.3 How can we solve related addition facts? 1.4 How do I use fact families to help solve subtraction problems? 1.5 How can I use basic properties of addition to help me subtract? How do they relate?
2. How can I make ten to help solve subtraction facts?	2. Some subtraction facts can be found by subtracting from the minuend (the larger number) an amount to get to 10 and then subtracting the amount that remains.	2.1 What strategies help solve subtraction problems? 2.2 How do I decide which operation to use to solve a problem? 2.3 How do you set up a subtraction problem?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Develop subtraction strategies. Work with a variety of strategies to build fluency with subtraction facts.

Sub-Concept/Topics:

Explore the inverse relationship between addition and subtraction. Use the *think addition* strategy to solve subtraction facts that are related to or nearby the familiar addition doubles.

Sub-Concept/Topics:

Explore two counting strategies for subtraction: counting back and counting up. To apply knowledge of the take-away model of subtraction to find answers to -0 and -1 subtraction facts and develop rules for these facts.

Theme:

More Fact Strategies

Conceptual Lens:

See pages 232 – 243 in Teacher's Lesson Guide

Sub-Concept/Topics:

Use "What's My Rule?" routine to practice problem solving.

Sub-Concept/Topics:

Extend work with the take-away model of subtraction to develop the *going-back-through-10* strategy.

Sub-Concept/Topics:

extend work with the distance model of subtraction to develop a strategy that uses the number 10: *going up through 10.*

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 – Grade 2
Unit Number/Title: Unit 3 More Fact Strategies
Conceptual Lens: More Fact Strategies
Appropriate Time Allocation (# of Days)**:** 14 Days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
2.OA.1	2.OA.2	2.NBT.3	2.NBT.5
2.NBT.7	2.NBT.9	2.MD.6	2.MD.8
2.G.2			

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
In Unit 3, more fact strategies are developed, with a focus on strategies for solving subtraction facts. Routines and games for practicing facts are introduced. Student learning will focus on: • Operations and Algebraic Thinking (Add and subtract within 20) • Number and Operations in Base Ten (Use place value understanding and properties of operations to add and subtract) Unit 3 focuses on the following topics/concepts: • Developing Subtraction Strategies • Relating Addition and Subtraction • Counting Strategies for Subtraction	• There are a variety of strategies to build fluency with subtraction facts • There is a relationship between subtraction and addition • Which counting strategy is more appropriate for a given fact • To identify patterns to help solve problems • To go back through 10 or up through 10 to solve subtraction facts	3-1 Day 1 – Solve an open response problem using their own fact strategies. Day 2 – Discuss selected drawings and explanations, and revise work. 3-2 Write subtraction number stories and generate related addition and subtraction facts. 3-3 Generate fact families using related numbers of Fact Triangles. 3-4 Play *Salute!* To find missing addends. 3-5 Discuss and use the counting-up and counting-back strategies for subtraction. 3-6 Explore the -0 and -1 fact strategies and play *Subtraction Top-it.* 3-7 Find missing numbers and missing rules in "What's My Rule?" problems.	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 1* pages 244-321 for lesson activities • Include Math Stations to assist struggling and advanced learners Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather	See page 234 of Teacher's Lesson Guide for instruction materials per lesson. • Activity Cards 35-46 • Quick Look Cards 81, 86, 87, 96, 98, 100, 101, 106, 110, 111, 118 • Counters • Cubes • Dominoes • 6-sided dice • Calculator • Number cards • Class number line • Number-grid poster • Toolkit bills • Square pattern blocks • Coin stamps • Stamp pad • Slate • Scissors • Paper clip • Envelope • Crayons • Fact triangles	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math and Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• "What's My Rule?" • Using 10 as a Friendly Number		3-8 Use doubles to solve subtraction facts. 3-9 Use the going-back-through-10 strategy for subtraction. 3-10Use the going-up-through-10 strategy for subtraction. 3-11Cover rectangles with squares, practice addition and subtraction facts on a fact wheel, and make coin stamp booklets. 3-12Day 1 – Administer the Unit Assessments. Day 2 – Administer the Open Response Assessment.	Routine and Temperature Routine. **ELA 3.1 – 3-12** *Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.*	• Pennies • Small plastic plate • Number grid • 2 in square stick-on notes • Fact wheel • Coins	synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 3 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 3 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 3 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 3-2 Writing Domino Facts (TM 255) 3-3 Modeling Subtraction Facts with Counters (Activity Card 37) 3-4 Playing *Penny Plate* (TM 267) 3-5 Playing *The Difference Game* (TM 273) 3-6 Using Number Lines for Subtraction (TM 279) 3-7 Fishing for the Rule (TM 285) 3-8 Playing *Roll and Record Doubles* (TM 293) 3-9 Subtracting with the Friendly Number 10 (TM 299) 3-10Finding Missing Addends (TM 305) 3-11Sorting and Counting Coins (TM 311)	**Enrichment** 3-2 Exploring Dice Subtraction (Activity Card 35) 3-3 Finding Subtraction Mystery Numbers (Activity Card 38) 3-4 Missing Addends (Activity Card 39) 3-5 Playing *The Number-Grid Difference Game* (TM 273) 3-6 Counting Up to Solve Subtraction Problems (TM 279) 3-7 Working with Even Numbers (Activity Card 41) 3-8 Subtracting Larger Numbers with Doubles (TM 293) 3-9 Going Back Through 100 (TM 299) 3-10Writing a Going-Through-10 Subtraction Story (TM 305) 3-11 Making Change (TM 311)	*See Readiness Activities and Extra Practice Activities 3-2 Use familiar objects to make up stories for given number models. 3-3 Introduce the term *fact families*. 3-4 Introduce the roles played by the dealer and the players in the game *Salute!* By modeling the actions as you name the role and display the words in writing. 3-5 Provide opportunities for choral counting in which children count up and count back as you move your hand forward and backward along a number line or number grid. 3-6 Review the everyday meanings of *same* and *different.* 3-7 Introduce the mathematical meaning of the word *table*. 3-8 Demonstrate the concept of *related facts* nonverbally using number cards. 3-9 Demonstrate the concept of friendly numbers. Show a number sentence and demonstrate using 10 as a friendly number. 3-10Use a cut-out number line to help English Learners understand using 10 as a “breaking point”. 3-11Introduce the word *overlap* by showing two stick-on notes that are overlapping.	**Readiness Activities** 3-2 Writing Domino Facts (TM 255) 3-3 Modeling Subtraction Facts with Counters (Activity Card 37) 3-4 Playing *Penny Plate* (TM 267) 3-5 Playing *The Difference Game* (TM 273) 3-6 Using Number Lines for Subtraction (TM 279) 3-7 Fishing for the Rule (TM 285) 3-8 Playing *Roll and Record Doubles* (TM 293) 3-9 Subtracting with the Friendly Number 10 (TM 299) 3-10Finding Missing Addends (TM 305) 3-11Sorting and Counting Coins (TM 311)
Extra Practice 3-2 Practicing Facts with Dominoes (Activity Card 36) 3-3 Making Fact Family Chains (TM 261) 3-4 Playing *Salute!* (TM 267)		**Unit 3 Vocabulary:** -0 facts; -1 facts; addition facts; column; counting back; counting up; diagonal; difference; double ten frame; equivalent	**Extra Practice** 3-2 Practicing Facts with Dominoes (Activity Card 36) 3-3 Making Fact Family Chains (TM 261) 3-4 Playing *Salute!* (TM 267)

3-5 Subtraction Strategies with Fact Triangles (Activity Card 40) 3-6 Practicing Subtraction Strategies with Fact Triangles (TM 279) 3-7 Practicing with "What's My Rule?" Tables (Activity Card 42) 3-8 Using Doubles to Subtract (TM 293) 3-9 Playing *Subtraction Top-it* (TM 299) 3-10Playing Fact Games (TM 305) 3-11Playing *Spinning for Money* (TM 311)		names; fact family; related facts; Fact Triangle; fact wheel; Facts Table; friendly number; function machine; going back though 10, going up through 10; input; output; making 10; missing addend; near doubles; rectangle; row; square; subtraction facts; subtraction number story; think-addition strategy; "What's My Rule?"	3-5 Subtraction Strategies with Fact Triangles (Activity Card 40) 3-6 Practicing Subtraction Strategies with Fact Triangles (TM 279) 3-7 Practicing with "What's My Rule?" Tables (Activity Card 42) 3-8 Using Doubles to Subtract (TM 293) 3-9 Playing *Subtraction Top-it* (TM 299) 3-10Playing Fact Games (TM 305) 3-11Playing *Spinning for Money* (TM 311)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 4 OVERVIEW** **Unit Title:** Place Value and Measurement

Unit Description and Objectives:

4-1 **Clocks and Telling Time** - Students tell time to nearest hour and half hour. Students will work with time and money.
4-2 **Telling Time to the Nearest 5 Minutes** – Students tell time to the nearest 5 minutes. Students will understand place value. Students will work with time and money.
4-3 **A.M. and P.M.** – Students tell time using A.M. and P.M. Students will work with time and money.
4-4 **Numeration and Place Value** – Students discuss place value and represent 3-digit numbers using base-10 blocks and expanded form. Students will understand place value.
4-5 **Using Place Value to Compare Numbers** – Students use place-value and expanded form to compare 3-digit numbers. Student will understand place value.
4-6 **Using Base-10 Blocks to Show a Number** – Day 1 – Students make sense of a 3-digit number represented by base-10 blocks by making trades or counting. Day 2 – The class analyzes explanations and drawings, and children revise their work. Students will understand place value.
4-7 **Playing *Target*** – Students use base-10 blocks to model addition and subtraction of multi-digit numbers. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.
4-8 ***How Big is a Foot?*** Students measure objects with a foot-long foot. Students will measure and estimate lengths in standard units. Students will represent and interpret data.
4-9 **The Inch**- Students are introduced to the inch as a standard unit of length. Students will measure and estimate lengths in standard units. Students will represent and interpret data.
4-10**The Centimeter** – Students are introduced to the centimeter as a standard unit of length. Students will measure and estimate lengths in standard units.
4-11**Matching Facts with Strategies, Measuring a Path, Exploring Arrays** – Students math subtraction facts with strategies, measure a path in inches and centimeters, and explore arrays. Students will add and subtract within 20. Students will work with equal groups of objects to gain foundations for multiplication. Students will use place value understanding and properties of operations to add and subtract. Students will measure and estimate lengths in standard units.
4-12 **Unit 4 Progress Check** – Day 1 – Administer the Unit Assessment Day 2 – Administer the Cumulative Assessment

Essential Questions and Enduring Understandings:

Essential Questions:	Enduring Understandings/Generalizations Students will understand that:	Guiding Questions
1. How can numbers to 100 be shown and compared?	1. In a two-digit number, the tens digit tells how many groups of ten and the ones digit tells the number of ones.	1.1 How does the position of a digit in a number affect its value? 1.2 How can numbers be expressed, ordered and compared? 1.3 What strategies can be used to continue a numerical sequence?
2. What number patterns are helpful in reading and writing numbers to 1,000?	2. Numbers may be composed, decomposed and represented in a variety of ways such as base ten blocks, diagrams, number lines, and expanded form.	2.1 How can the position of a digit in a number affect its value? 2.2 How can numbers be expressed, ordered and compared? 2.3 How are place value patterns repeated in large numbers? 2.4 How can large numbers be expressed, ordered and compared?
3. How can clocks show data and answer questions?	3. Time can be given to the nearest five minutes. Time can be expressed using different units that are related to each other. A.M. and P.M. are used to designate certain time periods.	3.1 What tools do we use to measure time? 3.2 What units do we use to measure time? 3.3 What are the different ways we can read/say the time? 3.4 What does telling time to the nearest five minutes mean? 3.5 How can counting by five help us to determine time in an hour? 3.6 How can we determine the number of hours in a day?
4. How can we choose appropriate tools and use them to measure? Why do we need to be able to estimate a measurement, and how do we know it is reasonable?	4. The length of any object can be used as a measurement unit for length, but a standard unit, such as an inch or centimeter, is always the same length.	4.1 How do we decide on the appropriate tool for measurement? 4.2 How do we use a measuring tool correctly? 4.3 How can we decide on appropriate units of measurement? 4.4 Why is it important for us to know how to measure using different units of measurement? 4.5 Why do we need to be able to estimate a measurement or value? 4.6How can we tell if an estimate is reasonable?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Provide a formal introduction to place value through hundreds.

Sub-Concept/Topics:

Tell and write time from analog and digital clocks, first to the nearest half hour and then to the nearest five minutes.

Sub-Concept/Topics:

Use place-value understanding to compare 3-digit numbers.

Theme:

Place Value and Measurement

Conceptual Lens:

See pages 322 – 333 in Teacher's Lesson Guide

Sub-Concept/Topics:

Explore the idea that place-value exchanges can be used to create new representations of numbers.

Sub-Concept/Topics:

Transition from measuring length using concrete objects to using rulers and tape measures marked in standard units.

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 - Grade 2
Unit Number/Title: Unit 4 / Place Value and Measure
Conceptual Lens: Place Value and Measure
Appropriate Time Allocation (# of Days)**:** 14 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
2.MD.1	2.MD.2	2.MD.3	2.MD.7
2.MD.9	2.NBT.1	2.NBT.2	2.NBT.3
2.NBT.5	2.NBT.7	2.OA.2	2.OA.4

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
Unit 4 extends students' understanding of place value, which provides a foundation for the development of strategies for fluently adding and subtracting multi-digit numbers. Student learning will focus on: • Number of Operations in Base Ten (Understand Place Value) • Measurement and Data (Measure and estimate lengths in standard units. Work with time and money.) Unit 4 focuses on the following Topics/Concepts: • Telling Time • Place Value • Length Measurement	• Analog clocks are clocks with hands • Digital clocks display time by showing the numbers of hours and minutes separated by a colon • The abbreviations A.M. and P.M. are used to indicate whether a time occurs during the first or second 12-hour period of the day • Place value is used to compare two numbers • Place value exchanges can be used to create new representations of numbers	4-1 Tell time to nearest hour and half hour. 4-2 Tell time to the nearest 5 minutes. 4-3 Tell time using A.M. and P.M. 4-4 Discuss place value and represent 3-digit numbers using bse-10 blocks and expanded form. 4-5 Use place-value and expanded form to compare 3-digit numbers. 4-6 Day 1 – Make sense of a 3-digit number represented by base-10 blocks by making trades or counting. Day 2 – Analyze explanations and drawings, and children revise their work. 4-7 Use base-10 blocks to model addition and subtraction multi-digit numbers. 4-8 Measure objects with a foot-long foot. 4-9 Introduce the inch as a standard unit of length.	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 1* pages 322-409 for lesson activities • Include Math Stations to assist struggling and advanced learners **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather Routine and Temperature Routine. **ELA 4-1 – 4-12**	See page 342 of Teacher's Lesson Guide for instruction materials per lesson. • Activity Cards 47 - 63 • Toolkit clock • Brads • Fact Triangles • Counters • Number cards • Slates • 5 minute clock • Scissors • Number grid poster • Index cards • Crayons • Colored pencils • Construction paper • Base-10 blocks • Glue • Quick Look Cards 82, 86, 92, 111, 112, and 120 • 1 inch square pattern blocks • 6 sided dice • Half-sheet paper • 12 inch ruler • 10 centimeter ruler • Tape measure • Cubes • Masking tape • Small objects to measure	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math & Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		4-10Introduce the centimeter as a standard unit of length. 4-11Match subtraction facts with strategies, measure a path in inches and centimeters, and explore arrays. 4-12Complete Unit Assessment	*Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.* **ELA 4-3 –** TM 349 ***Tuesday*** by David Wiesner (Clarion, 1991). Students will create their own adventures with a sequence of events at 8:00 pm continue through the am. **ELA 4-8** – TM 383. Read ***How Big Is a Foot?*** by Rolf Myler (Dell Yearling, 1991). Students will discuss why the bed in the story did not turn out to be the right size. Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf		synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 4 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 4 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 4 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 4-1 Using an Hour-Hand-Only Clock (TM 335) 4-2 Illustrating Daily Activities (TM 343) 4-3 Sorting Before- and After- Lunch Activities (TM 349) 4-4 Counting Practice (TM 355) 4-5 Use Base-10 Blocks to Build and Write Numbers (TM 361) 4-7 Representing 2-Digit Numbers (TM 375) 4-8 Measuring Objects More or Less than One Foot Long (TM 381) 4-9 Measuring Length with Square Pattern Blocks (TM 387) 4-10Measuring with Centimeter Cubes (TM 393) 4-11Measuring Length Two Ways (TM 399)	**Enrichment Activities** 4-1 Solving Time Problems (TM 335) 4-2 Listing My Activities (TM 343) 4-3 Writing a P.M. to A.M. Story (Activity Card 49) 4-4 Creating 3-Digit Numbers (Activity Card 50) 4-5 Finding Mystery Numbers (Activity Card 52) 4-7 Playing *Target* to 200 (TM 375) 4-8 Estimating and Measuring with the Foot-Long Foot (Activity Card 54) 4-9 Estimating and Measuring (Activity Card 56) 4-10Estimating with Centimeters (Activity Card 58) 4-11Exploring Length Units (TM 399)	*See Readiness Activities and Extra Practice Activities 4-1 Display a cartoon-like clock face with facial features and clock hands with human-looking hand at the end to introduce the terms *clock face* and *hands of the clock* 4-2 Model length with hand gestures while using the word *long* and *short* as a way to introduce the *long minute hand* and the *short minute hand*. 4-3 Introduce the terms A.M. and P.M. in reference to activities with which all children are familiar. Show pictures of typical morning and afternoon activities. 4-4 Link the names of base-10 blocks to familiar everyday items to reinforce the description of their shapes. 4-5 Display visuals showing an example of each base-10 block along with its name. 4-7 Introduce the term *target* by showing and discussing sports-related pictures, such as a soccer net or a finish line. 4-8 Display the foot-long foot visual, a foot ruler, and pictures of feet. 4-9 Practice using the singular and plural forms of the word foot. 4-10To help children understand that the term *centimeter* is a unit of measure, use the statements that first name the object and then indicate the measure. 4-11Introduce the word *match* by showing pictures of things, or the objects themselves, that are identical matches, such as socks.	**Readiness Activities** 4-1 Using an Hour-Hand-Only Clock (TM 335) 4-2 Illustrating Daily Activities (TM 343) 4-3 Sorting Before- and After- Lunch Activities (TM 349) 4-4 Counting Practice (TM 355) 4-5 Use Base-10 Blocks to Build and Write Numbers (TM 361) 4-7 Representing 2-Digit Numbers (TM 375) 4-8 Measuring Objects More or Less than One Foot Long (TM 381) 4-9 Measuring Length with Square Pattern Blocks (TM 387) 4-10Measuring with Centimeter Cubes (TM 393) 4-11Measuring Length Two Ways (TM 399)

Extra Practice Activities 4-1Telling and Writing Time (Activity Card 47) 4-2 Telling and Writing Time to 5 Minutes (Activity Card 48) 4-3 Sequencing A.M. and P.M. Activities (TM 349) 4-4 Building and Writing Numbers (Activity Card 51) 4-5 *The Digit Game* with Symbols (Activity Card 53) 4-7 Practicing *Target* to 50 (TM 375) 4-8 Measuring Lengths of String (Activity Card 55) 4-9 Measuring with Square Pattern Blocks and a Ruler (Activity Card 57) 4-10Measure with Centimeters (Activity Card 59) 4-11Drawing and Measuring a Crooked Path (Activity Card 63)		**Unit 4 Vocabulary:** 24-hour timeline; A.M.; P.M.; analog clock; Base-10 blocks; centimeter; cube; flat; long; digital clock; digit; estimate; expanded form; foot; hour; hour hand; inch; is greater than (>); is less than (<); metric system; minute; minute hand; represent; ruler; standard unit; U.S. customary system	**Extra Practice Activities** 4-1Telling and Writing Time (Activity Card 47) 4-2 Telling and Writing Time to 5 Minutes (Activity Card 48) 4-3 Sequencing A.M. and P.M. Activities (TM 349) 4-4 Building and Writing Numbers (Activity Card 51) 4-5 *The Digit Game* with Symbols (Activity Card 53) 4-7 Practicing *Target* to 50 (TM 375) 4-8 Measuring Lengths of String (Activity Card 55) 4-9 Measuring with Square Pattern Blocks and a Ruler (Activity Card 57) 4-10Measure with Centimeters (Activity Card 59) 4-11Drawing and Measuring a Crooked Path (Activity Card 63)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 5 OVERVIEW** **Unit Title:** Addition and Subtraction

Unit Description and Objectives:

5-1 **Playing *Beat the Calculator* –** Students play *Beat the Calculator* to develop fact power by using mental strategies to add two 1-digit numbers. Students will add and subtract within 20.

5-2 **Using Coins to Buy Things** – Students review coin equivalencies and make different combinations of coins for the same amount of money. Students will understand place value. Students will work with time and money.

5-3 **Counting Up with Money** – Students find coin combinations to pay for items and make change by counting up. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract. Students will work with time and money.

5-4 **Coin Calculations** – Students make purchases and practice making change. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract. Students will work with time and money.

5-5 **Exploring Arrays, Time, and Shapes** – Students make arrays, match clock faces to digital notation, and construct shapes on geoboards. Students will work with equal groups of objects to gain foundations for multiplication. Students will work with time and money. Students will reason with shapes and their attributes.

5-6 **Mentally Adding and Subtracting 10 and 100** – Students develop strategies for mentally adding and subtracting 10 and 100. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

5-7 **Open Number Lines** – Students use open number lines as a tool for solving number stories. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract. Students will relate addition and subtraction to length.

5-8 **Change-to-More Number Stories** – Students solve change-to-more number stories. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract.

5-9 **Parts-and-Total Number Stories** – Students solve parts-and-total number stories. Students will represent and solve problems involving addition and subtraction. Students will add and subtract within 20. Students will use place value understanding and properties of operations to add and subtract.

5-10**Change Number Stories** – Students solve change number stories involving temperature. Students will represent and solve problems involving addition and subtraction. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

5-11**Adding Multidigit Numbers** – Day 1 – Students complete an open response problem by solving an addition problem using two different strategies. Day 2 – The class discusses selected strategies, and children revise their work. Students will use place value understanding and properties of operations to add and subtract. Students will work with time and money.

5-12**Unit 5 Progress Check** – Day 1 – Administer the Unit Assessments. Day 2 – Administer the Open Response Assessment.

Essential Questions and Enduring Understandings:

Essential Questions:	Enduring Understandings/Generalizations Students will understand that:	Guiding Questions
1. How can I use addition and subtraction to solve problems?	1. Addition and subtraction are related operations that we use in everyday problem solving.	1.1 What strategies help solve addition and subtraction problems? 1.2 What is the relationship between addition and subtraction? 1.3 How can knowing my facts to 20 make math easier? 1.4 How do I know when to add or subtract? 1.5 How do I use addition and subtraction to find the missing value? 1.6 Why is knowing basic facts important in solving 2-digit math problems? 1.7 Why is understanding place value important in solving 2-digit problems? 1.8 How can I use 2-digit addition and subtraction to find a missing value?
2. Why is it important to understand money in our everyday life?	2. The amount of money can often be represented using different combinations of coins and bills. Money amounts can usually be counted in different ways. When counting money, it is usually easier to start with the coin or bill with the greatest value.	2.1 How does sorting and grouping help to count money? 2.2 Why is it important to be able to count amounts of money? 2.3 What strategies help us count money? 2.4 What symbols do I use when writing different amounts of money? 2.5 What are different ways to represent an amount of money? 2.6 How does knowing how to count money help us make change? 2.7 How do you make sure you are given the correct change? 2.8 How do you know if you have enough money to buy something?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Use dollar bills, quarters, dimes, nickels, and pennies to solve problems that involve buying items and making change.

Sub-Concept/Topics:

Play *Beat the Calculator*, a game that helps students develop their fact power (the ability to recall basic facts instantly).

Sub-Concept/Topics:

Use patterns when skip counting by 10s and 100s on a calculator to develop rules for mentally adding and subtracting.

Theme:

Addition and Subtractions

Conceptual Lens:

See pages 432 – 443 in Teacher's Lesson Guide Volume 2

Sub-Concept/Topics:

Apply rules for adding and subtraction 10 to develop mental strategies for solving more difficult addition and subtraction problems.

Sub-Concept/Topics:

Use change diagrams and parts-and-total diagrams to organize information in number stories.

Sub-Concept/Topics:

Use an open number line to help students record and keep track of the steps in their mental strategies.

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 - Grade 2
Unit Number/Title: Unit 5 / Addition and Subtraction
Conceptual Lens: Addition and Subtraction
Appropriate Time Allocation (# of Days)**:** 14 days

Primary Core Content Standards referenced With Cumulative Progress Indicators

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
In Unit 5, addition and subtraction problems are reviewed in the context of money and number stories. Mental strategies for adding and subtracting 10 and 100 are developed. Student learning will focus on: • Operations and Algebraic Thinking (Represent and solve problems involving addition and subtraction) • Number and Operations in Base Ten (Use place value understanding and properties of operations to add and subtract) • Measurement and Data (Work with time and money) Unit 5 focuses on the following Topics/Concepts:	• Fact power is critical for problem solving • Coins and paper money have different values • Addition and subtraction strategies are used when counting coins and making change • Open number lines are used as an addition and subtraction strategy • Addition or subtraction is used to solve Change-to-more number stories and Parts-and-Total number stories • The unknown can change in a number story	5-1 Play *Beat the Calculator* to develop fact power by using mental strategies to add two 1-digit numbers. 5-2 Review coin equivalencies and make different combinations of coins for the same amount of money. 5-3 Find coin combinations to pay for items and make change by counting up. 5-4 Make purchases and practice making change. 5-5 Make arrays, match clock faces to digital notation, and construct shapes on geoboards. 5-6 Develop strategies for mentally adding and subtracting 10 and 100. 5-7 Use open number lines as a tool for solving number stories.	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 2* pages 432 - 519 for lesson activities • Include Math Stations to assist struggling and advanced learners Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf **Science – Every Lesson** – See TM pages 24 – 37 to	See page 434 of Teacher's Lesson Guide for instruction materials per lesson. • Activity Cards 64 – 76 • Calculator • Number cards • Inch ruler • Slate • Paper triangle • Dominoes • Number grid • Scissors • Toolkit coins • Centimeter ruler • Class Data Pad • Large paper clip • Scissors • 6-sided dice • Base-10 blocks • Centimeter cubes • Geoboards • Rubber bands • Pattern blocks • Envelope • Straight edge • Pattern-Block Template • Class Number Line	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math & Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Fact Power • Money • Open Number Lines • Number Stories and Number Models		5-8 Solve change-to-more number stories. 5-9 Solve parts-and-total number stories. 5-10Solve change number stories involving temperature. 5-11Day 1 – Complete an open response problem by solving an addition problem using two different strategies. Day 2- Discuss selected strategies, and revise work. 5-12Unit 5 Progress Check	implement the Weather Routine and Temperature Routine. **ELA 5-1 – 5-12** *Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.* **Technology 5-1** TM 447. Students will play *Beat the Calculator* to practice fact fluency. **ELA 5-2** TM 451 – Students will write money stories with money. **Career Education/Consumer, Family & Life Skills 5-2** TM 451 – Students will practice buying and selling using exact change. **Career Education/Consumer, Family & Life Skills 5-3** TM 457 – 460 – Students will practice making change. **Career Education/Consumer, Family & Life Skills 5-4** TM	• Number-Grid poster • Crayon • Quick Look Cards 96, 108, 117 • Shopping bag • Number line • Fact Triangles • Craft sticks • Class Thermometer Poster • Glue	synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
			463 – 466 Students will practice making change and paying for items with exact change **ELA 5-9** TM 495. Students write their own number stories to apply their understanding of parts-and-total situations. **Science/ Social Studies 5-10** TM 501. Students find temperature change at different times for different cities. **Science 5-10** TM 501 – Students practice solving temperature change problems. **Science 5-10** TM 502 – Students will observe and discuss the thermometer. **Career Education/Consumer, Family & Life Skills 5-11** TM 507 - 513 – Students will calculate the cost of purchasing two items several ways.		nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 5 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 5 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 5 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 5-1 Reviewing Fact Inventories (TM 445) 5-2 *Dime-Nickel-Penny Grab* (Activity Card 64) 5-3 Use Dice to Count Up (Activity Card 66) 5-4 Counting on the Number Grid with Coins (TM 463) 5-5 Identifying Pattern-Block Template Shapes (TM 469) 5-6 Counting by 10s on a Number Grid (TM 475) 5-7 Adding 10s and 1s (TM 481) 5-8 Showing Change on Number Lines (TM 487) 5-9 Joining Objects (TM 495) 5-10Showing Change on a Number Line (TM 501)	**Enrichment Activities** 5-1 Playing *Beat the Calculator* with Extended Facts (TM 445) 5-2 Writing Number Stories with Money (TM 451) 5-3 Solving a Coin Puzzle (TM 457) 5-4 Calculating the Value of a Name (Activity Card 68) 5-5 Working with Pattern-Block Puzzles (TM 469) 5-6 Adding and Subtracting 10s and 100s (Activity Card 72) 5-7 Using Open Number Lines with Larger Numbers (TM 481) 5-8 Writing Change-to-More Stories (Activity Card 75) 5-9 Writing Missing-Part Number Stories (Activity Card 76) 5-10Finding Changes in Temperature (TM 501)	*See Readiness Activities and Extra Practice Activities 5-1 Use Math Master 118 to connect developing physical power by doing pull-ups and developing fact power by practicing facts. 5-2 Demonstrate the meaning of the term *trade* as “to exchange for something equivalent.” 5-3 Review polite phrases used in conversations between customers and clerks such as: • Thank you. • How much is that? • Here is your change. • You’re welcome. • Please. • Your bill is _____. • Your change is _____. 5-4 Use a toy vending machine or a copy of Math masters TA24 to introduce the terms shown on journal page 112. 5-5 Use Total Physical Response modeling and prompts to provide experiences hearing and using the terms ____*-sided shape* and *a shape with _____ sides.* 5-6Using the number grid and number line, model: circle the number that is 10 more, use your finger to hop from ___ to ___. 5-7 Show examples of “open number line” and “regular number line”. 5-8 Use concrete examples to introduce the meaning of *change* as “to become different”.	**Readiness Activities** 5-1 Reviewing Fact Inventories (TM 445) 5-2 *Dime-Nickel-Penny Grab* (Activity Card 64) 5-3 Use Dice to Count Up (Activity Card 66) 5-4 Counting on the Number Grid with Coins (TM 463) 5-5 Identifying Pattern-Block Template Shapes (TM 469) 5-6 Counting by 10s on a Number Grid (TM 475) 5-7 Adding 10s and 1s (TM 481) 5-8 Showing Change on Number Lines (TM 487) 5-9 Joining Objects (TM 495) 5-10Showing Change on a Number Line (TM 501)

		5-9 Use role play and teacher think-aloud statements to help children construct the meaning of the term *total* to mean “quantities combined to make a desired or targeted amount”. 5-10Use objects, pictures, and gestures to demonstrate the meanings of the word *hot*, *cold*, *cool*, and *warm*.	
Extra Practice Activities 5-1 Making a Fact-Family Chain (TM 445) 5-2 Buying and Selling (Activity Card 65) 5-3 Making Change by Counting Up (Activity Card 67) 5-4 Practicing Making Change (TM 463) 5-5 Playing *Clock Concentration* (Activity Card 70) 5-6 Adding and Subtracting 10 and 100 (Activity Card 73) 5-7 Using Open Number Lines to Add (Activity Card 74) 5-8 Solving More “Fishy” Stories (TM 487) 5-9 Solving more Parts-and-Total Stories (TM 495) 5-10Solving More Temperature-Change Stories (TM 501)		**Unit 5 Vocabulary:** Addition fact; array; change diagram; change-to-less number story; change-to-more number story; degree Fahrenheit; equivalencies; fact power; mental addition; mental subtraction; open number line; parts-and-total diagram; parts-and-total number story; thermometer; total	**Extra Practice Activities** 5-1 Making a Fact-Family Chain (TM 445) 5-2 Buying and Selling (Activity Card 65) 5-3 Making Change by Counting Up (Activity Card 67) 5-4 Practicing Making Change (TM 463) 5-5 Playing *Clock Concentration* (Activity Card 70) 5-6 Adding and Subtracting 10 and 100 (Activity Card 73) 5-7 Using Open Number Lines to Add (Activity Card 74) 5-8 Solving More “Fishy” Stories (TM 487) 5-9 Solving more Parts-and-Total Stories (TM 495) 5-10Solving More Temperature-Change Stories (TM 501)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 6 OVERVIEW** **Unit Title:** Whole Number Operations and Number Stories

Unit Description and Objectives:

6-1 **Representing Data: Pockets** – Students draw picture graphs and bar graphs to represent a data set. Students will understand place value. Students will relate addition and subtraction to length. Students will represent and interpret data.

6-2 **Comparison Number Stories** – Students solve comparison number stories. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract. Students will relate addition and subtraction to length.

6-3 **Interpreting Number Stories** – Students choose diagrams to use for solving number stories. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract. Students will relate addition and subtraction to length.

6-4 **Animal Number Stories** – Students solve animal number stories. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract. Students will relate addition and subtraction to length.

6-5 **Two-Step Number Stories** – Students solve two-step number stories. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract.

6-6 **Recording Addition Strategies** – Students make ballpark estimates and invent and record their own strategies for solving addition problems. Students will use place value understanding and properties of operations to add and subtract.

6-7 **Partial-Sums Addition, Part 1** – Students use base-10 blocks to find partial sums and build readiness for partial-sums addition. Students will understand that the three digits of a three digit number represents amounts of hundreds, tens, and ones. Students will use place value understanding and properties of operations to add and subtract.

6-8 **Partial-Sums Addition, Part 2** – Students are introduced to partial-sums addition. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

6-9 **Subtracting with Base-10 Blocks** – Day 1 – Students complete an open response problem. Day 2 – Students compare strategies and revise their work. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract.

6-10 **Exploring Arrays, Lengths, and Shapes** – Students build arrays on geoboards, measure and compare lengths, and create shapes. Students will work with equal groups of objects to gain foundations for multiplication. Students will understand place value. Students will measure and estimate lengths in standard units. Students will reason with shapes and their attributes.

6-11 **Unit 6 Progress Check** – Day 1 – Administer the Unit Assessments. Day 2 – Administer the Cumulative Assessment.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. How can clocks, bar graphs, and pictographs be used to show data and answer questions?	1. Data can be organized in a variety of ways. Pictographs make it easier to compare data.	1.1 What questions can be answered from a pictograph? 1.2 Why is data collected and analyzed? 1.3 How can predictions be made based on data? 1.4 How can you use a pictograph to make comparisons?
2. How does place value help me to better understand the base-ten number system?	2. Our place value number system makes it easy to name the number that is 10 more or 10 less than any other given number by simply adjusting the digit in the tens place.	2.1 How do I use place value to compare two or more numbers? 2.2 How can I use 10, 100, and 1000 as benchmarks to help me estimate? 2.3 What is a number sentence and how can I use it to solve word problems? 2.4 How do we use addition to tell number stories?
3. What are some ways to think about addition and subtraction? .	3. Parts of a whole is one interpretation of addition. Addition number sentences can be used to show parts of a whole. Joining parts to make a whole is one interpretation of addition. Addition number sentences can be used to show joining parts of a whole. Separating parts from a whole and comparison are two interpretations of subtraction. Subtraction number sentences can be used to show separating parts from a hole or comparison subtraction situations.	3.1 How do I know where to begin when solving a problem? 3.2 How does explaining my process help me to understand a problem's solution better? 3.4 How do I decide what strategy will work best in a given problem situation? 3.5 What do I do when I get stuck?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Solve number stories that describe comparison situations.

Sub-Concept/Topics:

Collect data and display the data on a picture graph and a bar graph.

Sub-Concept/Topics:

Solve *two-step number stories*.

Theme:

Whole Number Operations and Number Stories

Conceptual Lens:

See pages 520 – 531 in Teacher's Lesson Guide Volume 2

Sub-Concept/Topics:

Write number models with unknowns to represent number stories.

Sub-Concept/Topics:

Use *partial-sums addition* which is the strategy of combining place-value groups.

Sub-Concept/Topics:

Represent addends using *expanded form*.

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 - Grade 2
Unit Number/Title: Unit 6 / Whole Number Operations and Number Stories
Conceptual Lens: Whole Number Operations and Number Stories
Appropriate Time Allocation (# of Days)**:** 13 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
2.NBT.1	2.NBT.2	2.NBT.3	2.NBT.4
2.NBT.5	2.NBT.7	2.NBT.9	2.OA.1 2.OA.4
2.MD.1 2.MD.4	2.MD.5 2.MD.6	2.MD.10	2.G.1

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
In Unit 6, students collect and display data on two different types of graphs. They are introduced to comparison number stories and two-step number stories. Student learning will focus on: • Operations and Algebraic Thinking (Represent and solve problems involving addition and subtraction) • Number and Operations in Base Ten (Use place value understanding and properties of operations to add and subtract) • Measurement and Data (Relate addition and subtraction to length) Unit 6 will focus on the following Topics/Concepts: • Data Displays • Number Stories	• Data can be collected, graphed and interpreted • There is more than one type of graph to display data • To solve number stories that describe comparison situations • Number stories can have more than one step to solve them • Partial-sums addition strategy can be used to solve addition problems	6-1 Draw picture graphs and bar graphs to represent a data set. 6-2 Solve comparison number stories. 6-3 Choose diagrams to use for solving number stories. 6-4 Solve animal number stories. 6-5 Solve two-step number stories. 6-6 Make ballpark estimates and invent and record their own strategies for solving addition problems. 6-7 Use base-10 blocks to find partial sums and build readiness for partial-sums addition. 6-8 Use partial-sums addition. 6-9 Day 1 - Complete an open response problem. Day 2 – Compare strategies and revise their work. 6-10Build arrays on geoboards, measure and compare lengths, and create shapes.	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 2* pages 520 - 601 for lesson activities • Include Math Stations to assist struggling and advanced learners **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather Routine and Temperature Routine. **ELA 6-1 – 6-11**	See page 522 of Teacher's Lesson Guide for instruction materials per lesson. • Activity Cards 77 – 85 • Base-10 blocks • 6- sided dice • Class Data Pad • Number grid • Number line • Quick Look Cards 81, 86, 89, 96, 98, 102, 103, 109 • Slate • Fact Triangle • Pennies or counters • Tape measures • Centimeter ruler • Manipulatives • Masking tape • Index cards • Number cards • Colored pencils • Geoboards • Rubber bands • Yardstick • Calculator • Scissors • Stick-on notes • Eraser • Glue • Large paper triangle	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math & Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Strategies for Addition		6-11Unit 6 progress check	*Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.* **ELA 6-1** TM 533. Students will write their own number stories. **ELA 6-4** TM 551. *Actual Size* by Steve Jenkins (Houghton Mifflin Harcourt 2011) Students will use the information from *Actual Size* to practice writing number stories. **Science/ ELA 6-4** TM 552-554. Students use animal heights and lengths to write and solve silly number stories. **ELA 6-5** TM 557. Children will read "Band-Aids" a poem from *Where the Sidewalk Ends* by Shel Silverstein (HarperCollins Publishing, 2004) and solve two-step problems. Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf	• string	synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment Activities	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 6 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 6 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 6 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 6-1 Recording Tally Marks (TM 533) 6-2 Comparing Penny Amounts (TM 539) 6-3 Organizing Information (TM 545) 6-4 Using Mental Strategies (TM 551) 6-5 Acting Out Two-Step Problems (TM 557) 6-6 Identifying Friendly Numbers (TM 563) 6-7 Reviewing Place Value (TM 569) 6-8 Reviewing Place Value (TM 575) 6-10Comparing Objects by Length (TM 591)	**Enrichment Activities** 6-1 Generating Number Stories (TM 533) 6-2 Comparing Number Stories (TM 539) 6-3 Writing Number Stories to Match Number Models (TM 545) 6-4 Matching Number Models (TM 551) 6-5 Writing a Two-Step Number Story (Activity Card 78) 6-6 Adding Strategy Posters (Activity Card 79) 6-7 Comparing Addition Strategies (TM 569) 6-8 Comparing Addition Strategies (Activity Card 82) 6-10Comparing Lengths by Body Parts (TM 591)	*See Readiness Activities and Extra Practice Activities 6-1 Scaffold the following terms with visuals and labels: *bar graph, bar, label, title, picture graph, graph key.* 6-2 Use the diagrams that appear in the lesson as visual models to help English learners understand the actions in number stories. 6-3 Introduce the terms *select* and *choose.* 6-4 Help children understand that the words *long* and *length* can be used to convey the same meaning; the words *high* and *height* can also be used for the same purposes. *6-5 Provide a template illustrating what it means to use drawing, words and number models.* 6-6 Introduce the expression *ballpark estimate*, *in the ballpark*, and *out of the ballpark.* 6-7 Contrast the meaning of *parts, partial,* and *whole*, using the terms with teacher think-aloud statements. 6-8 Introduce the meaning of *expand* by demonstrating an action such as playing the accordion or blowing up a balloon.	**Readiness Activities** 6-1 Recording Tally Marks (TM 533) 6-2 Comparing Penny Amounts (TM 539) 6-3 Organizing Information (TM 545) 6-4 Using Mental Strategies (TM 551) 6-5 Acting Out Two-Step Problems (TM 557) 6-6 Identifying Friendly Numbers (TM 563) 6-7 Reviewing Place Value (TM 569) 6-8 Reviewing Place Value (TM 575) 6-10Comparing Objects by Length (TM 591)

		6-10To scaffold the Quick Looks activity provide simple posted sentence frames, such as the following: • I moved _____. • I filled in _____. • I put together _____. •	
Extra Practice Activities 6-1 Making a Bar Graph (TM 533) 6-2 More Comparison Stories (TM 539) 6-3 Solving a Partner's Number Story (TM 545) 6-4 More Animal Stories (Activity Card 77) 6-5 Solving More Two-Step Problems (TM 557) 6-6 Adding 2-Digit Numbers (Activity Card 80) 6-7 Finding Partial Sums with Base-10 Blocks (Activity Card 81) 6-8 Finding Partial Sums with Base-10 Blocks (Activity Card 81) 6-10Comparing Lengths of String (TM 591)		**Unit 6 Vocabulary** Ballpark estimate; bar graph; comparison diagram; comparison number story; data; difference; geoboard; graph key; partial sums; partial-sums addition; picture graph; quantity; rectangle array; tally chart; two-step number story	**Extra Practice Activities** 6-1 Making a Bar Graph (TM 533) 6-2 More Comparison Stories (TM 539) 6-3 Solving a Partner's Number Story (TM 545) 6-4 More Animal Stories (Activity Card 77) 6-5 Solving More Two-Step Problems (TM 557) 6-6 Adding 2-Digit Numbers (Activity Card 80) 6-7 Finding Partial Sums with Base-10 Blocks (Activity Card 81) 6-8 Finding Partial Sums with Base-10 Blocks (Activity Card 81) 6-10Comparing Lengths of String (TM 591)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 7 OVERVIEW** **Unit Title:** Whole Number Operations and Measurement Data

Unit Description and Objectives:

7-1 **Playing *Hit the Target* –** Students practice finding differences between 2-digit numbers and multiples of 10. Students will add and subtract within 20. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

7-2 **Four or More Addends** – Day 1 – Students solve an open response problem by applying place-value concepts and addition properties. Day 2 – Students discuss selected solutions, and revise their work. Students will represent and solve problems involving addition and subtraction. Students will add and subtract within 20. Students will use place value understanding and properties of operations to add and subtract.

7-3 **Playing *Basketball Addition*** – Students solve addition problems with three or more addends. Students will use place value understanding and properties of operations to add and subtract.

7-4 **Measuring with Yards** – Students explore U.S. customary length units and measure to the nearest yard. Students will measure and estimate lengths in standard units.

7-5 **Measuring with Meters** – Students find personal references for metric units of measure; they choose appropriate units and tools to estimate and measure lengths. Students will measure and estimate lengths in standard units.

7-6 **Generating Data: Standing Jumps and Arm Spans** – Students measure lengths to the nearest centimeter and to the nearest inch. Students will measure and estimate lengths in standard units. Students will represent and interpret data.

7-7 **Representing Data: Standing Jumps** – Students discuss the shortest and longest standing jumps and create a line plot for the data. Students will use place value understanding and properties of operations to add and subtract. Students will relate addition and subtraction to length. Students will represent and interpret data.

7-8 **Representing Data: Arm Span** – Students make a frequency table and a line plot for a set of data. Students will use place value understanding and properties of operations to add and subtract. Students will represent and interpret data.

7-9 **Exploring Shape Attributes, Graphs, and Measurements** – Students sort shapes, draw a picture graph, and measure body parts. Students will measure and estimate lengths in standard units. Students will represent and interpret data. Students will reason with shapes and their attributes.

7-10**Unit 7 Progress Check** – Day 1 – Administer the Unit Assessment Day 2 – Administer the Open Response Assessment

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. How do we gather, organize, and interpret information?	1. Questions can be answered by the collection of data.	1.1 Why do we need to collect data to answer questions? 1.2 What are ways to gather and record information? 1.3 What can the questions tell us about our data? 1.4 How can we use data to help us understand answers to questions posed?
2. How can we choose appropriate tools and use them to measure?	2. The length of some objects is measureable. The length of any object can be used as a measurement unit for length, but a standard unit, such as an inch or centimeter, is always the same length.	2.1 How do we decide on the appropriate tool for measurement? 2.2 How do we use a measuring tool correctly? 2.3 How can we decide on appropriate units of measurement? 2.4 Why is it important for us to know how to measure using different units of measurement? 2.5 Why do we measure? 2.6 Why do we need standardized units of measurement? 2.7 How does what we measure influence how we measure? 2.8 How can you measure the length of an object using nonstandard units? 2.9 How can you use addition and subtraction to solve measurement problems?
3. Why do we need to be able to estimate a measurement, and how do we know it is reasonable?	3. An estimate is reasonable if it is close to the actual measurement.	3.1 Why do we need to be able to estimate a measurement or value? 3.2 How can we tell if an estimate is reasonable? 3.3 How exact does a measurement have to be?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Solve addition problems involving three or more addends.

Sub-Concept/Topics:

Use multiples of 10 as breaking points when mentally adding or subtracting 2-digit numbers.

Sub-Concept/Topics:

Use yardsticks and meter sticks to measure lengths and distance in *yards* and *meters*.

Theme:

Whole Number Operations and Measurement and Data

Conceptual Lens:

See pages 602 – 613 of Teacher's Lesson Guide Volume 2

Sub-Concept/Topics:

Use personal measurement references to estimate lengths.

Sub-Concept/Topics:

Generate measurement data by measuring the length of arm spans and standing jumps to the nearest centimeter and inch.

Sub-Concept/Topics:

Organize data into a line plot.

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 - Grade 2
Unit Number/Title: Unit 7 / Whole Number Operations and Measurement and Data
Conceptual Lens: Whole Number Operations and Measurement and Data
Appropriate Time Allocation (# of Days)**:** 12 days

Primary Core Content Standards referenced With Cumulative Progress Indicators							
2.OA.1	2.OA.2	2.NBT.1	2.NBT.3	2.NBT.5	2.NBT.6	2.NBT.9	
2.G.1		2.MD.1		2.MD.2		2.MD.3	
2.MD.4		2.MD.6		2.MD.9		2.MD.10	

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
In Unit 7, addition and subtraction strategies are explored and are used to add three or more numbers. Units of yards and meters are used to measure distances. Data is collected and displayed in a frequency table and a line plot. Student learning will focus on: • Number and Operation in Base Ten (Use place value understanding and properties of operations to add and subtract) • Measurement and Data (Measure and estimate lengths in standard units. Represent and interpret data) Unit 7 will focus on the following Topics/ Concepts : • Addition and Subtraction Strategies	• To use multiples of 10 when mentally adding or subtracting 2-digit numbers • To apply the properties of addition when solving addition problems with three or more addends • What to consider when selecting a measurement tool to measure a specific item • How to use personal measurement references to estimate length • Data can be represented in line plots	7-1 Practice finding differences between 2-digit numbers and multiples of10. 7-2 Day 1 – Solve an open response problem by applying place-value concepts and addition properties. Day 2 – Discuss selected solutions, and revise their work. 7-3 Solve addition problems with three or more addends. 7-4 Explore U.S. customary length units and measure to the nearest yard. 7-5 Find personal references for metric units of measure; choose appropriate units and tools to estimate and measure lengths. 7-6 Measure lengths to the nearest centimeter and to the nearest inch. 7-7 Discuss the shortest and longest standing	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 2* pages 602-677 for lesson activities • Include Math Stations to assist struggling and advanced learners **ELA 7-1 – 7-10** *Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson*	See page 604 of Teacher's Lesson Guide for instruction materials per lesson. • Activity Cards 86 – 98 • Calculator • Yardstick • Counters • Number cards • Slate • Number-grid Poster • Number-grid • Colored pencils • Base-10 blocks • 20-sided polyhedral die • 6-sided die • Paper clip • Egg carton • Square pattern block • Tape measure • Class Data Pad • 12-inch ruler • 10-centimeter ruler • Path marked with masking tape • Meter stick • Tape measure	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math & Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Length Measurement Units and Tools • Data Displays		jumps and create a line plot for the data. 7-8 Make a frequency table and a line plot for a set of data. 7-9 Sort shapes, draw a picture graph, and measure body parts. 7-10Administer the Unit Assessments	*Each Unit provides students with the opportunity to answer open ended response questions.* **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather Routine and Temperature Routine. **Science / Social Studies 7-1** TM 619. Students will solve number stories about the growth of a bamboo plant. **Comp. Health & Physical Ed. 7-3** TM 633. Students practice addition by calculating the scores for two teams in *Basketball Addition* Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf	• Centimeter cube • Fact Triangles • Pattern-Block Template • Chalk • Penny • Stick-on notes	synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment Activities	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 7 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 7 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 7 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 7-1 Making Multiples of 10 (TM 615) 7-3 Using Base-10 Blocks to Add (Activity Card 87) 7-4 Comparing Standard Units (TM 637) 7-5 Selecting Tools (TM 643) 7-6 Comparing Units (TM 649) 7-7 Collecting and Organizing Data (TM 655) 7-8 Recording Tally Marks (TM 661) 7-9 Discussing Picture Graphs (TM 667)	**Enrichment Activities** 7-1 Playing *Hit the Target* with Other Numbers (TM 615) 7-3 Adding Four 2-Digit Numbers (Activity Card 88) 7-4 Using Yards to Measure a Path (TM 637) 7-5 Using Meters to Measure a Path (TM 643) 7-6 Making Up and Solving Number Stories (TM 649) 7-7 Making a Line Plot (Activity Card 92) 7-8 Questions for Arm Span Line Plot (Activity Card 94) 7-9 Drawing a Bar Graph (TM 667)	*See Readiness Activities and Extra Practice Activities 7-1 Build children's understanding of the term *change to* as meaning "to make something different or turn it into something else". 7-3 Build background knowledge about basketball. 7-4 Display labeled pictures of various kinds of *yards*, such as backyard, a front yard, and a school yard. In simple sentences, describe what might go on in such settings. 7-5 Display a labeled yardstick, meter stick, and tape measure. 7-6 Model touching your arm as you say *arm*. Show your arms outstretched and say: *This is my arm span.* 7-7 Use concrete objects and think-alouds to review how descriptive words in English take the comparative –er and superlative –est endings. 7-8 Use demonstrations to help children understand the terms *frequent* and *frequency* in terms of counting and totaling. 7-9 Use the verbs *sort* and *group* interchangeably to build children's understanding that *sorting* results in groups of objects that share a common attribute.	**Readiness Activities** 7-1 Making Multiples of 10 (TM 615) 7-3 Using Base-10 Blocks to Add (Activity Card 87) 7-4 Comparing Standard Units (TM 637) 7-5 Selecting Tools (TM 643) 7-6 Comparing Units (TM 649) 7-7 Collecting and Organizing Data (TM 655) 7-8 Recording Tally Marks (TM 661) 7-9 Discussing Picture Graphs (TM 667)
Extra Practice Activities 7-1 Finding Difference (Activity Card 86)		**Unit 7 Vocabulary:**	**Extra Practice Activities** 7-1 Finding Difference (Activity Card 86)

7-3 Adding Four Numbers (Activity Card 89) 7-4 Estimating and Measuring with Yards (Activity Card 90) 7-5 Estimating and Measuring with Meters (Activity Card 91) 7-6 Comparing Arm Span to Height (TM 649) 7-7 Measuring Objects for a Line Plot (Activity Card 93) 7-8 Line Plot of Heights (TM 661) 7-9 Drawing a Favorite Fruits Bar Graph (TM 667)		Addend; arm span; frequency table; line plot; meter; yard; multiple of 10; partial-sums addition; personal reference; standard unit	7-3 Adding Four Numbers (Activity Card 89) 7-4 Estimating and Measuring with Yards (Activity Card 90) 7-5 Estimating and Measuring with Meters (Activity Card 91) 7-6 Comparing Arm Span to Height (TM 649) 7-7 Measuring Objects for a Line Plot (Activity Card 93) 7-8 Line Plot of Heights (TM 661) 7-9 Drawing a Favorite Fruits Bar Graph (TM 667)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 - Grade 2

Unit #: **UNIT 8 OVERVIEW** **Unit Title:** Geometry and Arrays

Unit Description and Objectives:

8-1 **Attributes of 2-Dimensional Shapes** – Students describe the attributes of 2-dimensional shapes. Students will reason with shapes and their attributes.
8-2 **Playing *Shape Capture*** – Students identify shapes that certain attributes while playing the game *Shape Capture*. Students will reason with shapes and their attributes.
8-3 **Comparing Triangles, Pentagons, and Hexagons** – Students build and compare various polygons. Students will reason with shapes and their attributes.
8-4 **Drawing and Reasoning About Quadrilaterals** – Day 1 – Students draw quadrilaterals with given attributes. Say 2 – Students discuss solutions and revise their work. Students will reason with shapes and their attributes.
8-5 **Attributes of 3-Dimensional Shapes** – Students sort and compare 3-dimensional shapes according to their attributes. Students will reason with shapes and their attributes.
8-6 **Partitioning Rectangles, Part 1 –** Students use manipulatives to partition rectangles into same-size squares. Students will reason with shapes and their attributes.
8-7 **Partitioning Rectangles, Part 2** – Students partition rectangles into same size squares. Students will reason with shapes and their attributes.
8-8 **Equal-Groups and Array Number Stories** – Students solve number stories about equal groups and Students will represent and solve problems involving addition and subtraction. Students will work with equal groups of objects to gain foundations for multiplication. Students will understand place value.
8-9 **More Equal Groups and Arrays** – Students build equal groups and arrays and write number models for them. Students will represent and solve problems involving addition and subtraction. Students will work with equal groups of objects to gain foundations for multiplication. Students will understand place value.
8-10**Playing *Array Concentration*** – Students play *Array Concentration* to practice finding the total number of objects and writing corresponding number models. Students will work with equal groups of objects to gain foundations for multiplication. Students understand place value.
8-11**Exploring Mystery Shapes, Polygons, and Equal Parts** – Students describe attributes of shapes, build polygons with trapezoids, and show fractions on geoboard. Students will reason with shapes and their attributes.
8-12**Unit 8 Progress Check**

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. What is the relationship between arrays and repeated addition?	1. Repeated addition involves joining equal groups and is one way to think about multiplication.	1.1 How can an array be used to help write a number sentence? 1.2 How are arrays and repeated addition related? 1.3 How can repeated addition help you understand multiplication?
2. What are features of a shape and how are they different from other shapes?	2. Shapes can be grouped and sorted in a variety of ways. A shape can be identified by the number of its sides, vertices, angles.	2.1 How do we use the terms angle, vertices, faces, sides, and edges to describe geometric figures? 2.2 What is an angle? 2.3 What are the attributes of a shape? 2.4 What are some ways to sort shapes? 2.5 What makes an angle a right angle? 2.6 How can we use a right angle to compare and sort shapes? 2.7 What are parallel lines? 2.8 How do you know if a shape has parallel sides?
3. How are 3 dimensional geometric shapes and objects classified?	3. Three-dimensional or solid figures have length, width, and height. Many 3 dimensional shapes can be described, classified, and analyzed by their faces or flat surfaces, edges, and vertices.	3.1 How can you sort 3 dimensional shapes? 3.2 How can you classify 3 dimensional shapes? 3.3 What happens when three-dimensional figures are cut and rearranged?
4. How can shapes and solids be described, and compared, and used to make other shapes?	4. Some shapes can be combined to make new shapes. Same shapes can be decomposed into other shapes.	4.1 How can a rectangle be partitioned? 4.2 How can plane shapes be cut, rearranged, and combined to create new shapes?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Describe shapes according to their attributes.

Sub-Concept/Topics:

Partition rectangles into rows and columns of the same size squares.

Sub-Concept/Topics:

Solve number stories involving equal groups of objects by using invented strategies.

Theme:

Geometry and Arrays

Conceptual Lens:

See pages 678 – 689 of Teacher's Lesson Guide Volume 2

Sub-Concept/Topics:

Solve number stories about finding the total number of objects in rectangular arrays.

Sub-Concept/Topics:

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 - Grade 2
Unit Number/Title: Unit 8 / Geometry and Arrays
Conceptual Lens: Geometry and Arrays
Appropriate Time Allocation (# of Days)**:** 14 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
2.G.1	2.G.2	2.G.3	2.OA.1
2.OA.4	2.NBT.2		

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
In Unit 8, students explore 2- and 3-dimensional shapes and their attributes. They partition rectangles into rows and columns of same-size squares. They explore strategies for determining the total number of objects in equal groups and rectangular arrays. Student learning will focus on: • Operations and Algebraic Thinking (Works with equal groups of objects to gain foundation for multiplication) • Geometry (Reason with Shapes and their attributes) Unit 8 will focus on the following Topics/ Concepts: • 2- and 3-Dimensional Shapes	• Shapes have attributes • Shapes can be sorted and compared • Shapes can be classified by dimensions • Solid figures can be described, classified and analyzed by their attributes • A rectangle can be partitioned into rows and columns of the same size squares • Arrays can be used to model multiplication	8-1 Describe the attributes of 2-dimensional shapes 8-2 Identify shapes that have certain attributes while playing the game *Shape Capture*. 8-3 Build and compare various polygons. 8-4Day 1- Draw quadrilaterals with given attributes. Day 2 – Discuss solutions and revise work. 8-5 Sort and compare 3-dimensional shapes according to their attributes. 8-6 Use manipulatives to partition rectangles into same-size squares. 8-7 Partition rectangles into same-size squares. 8-8 Solve number stories about equal groups and arrays. 8-9 Build equal groups and arrays and write number models for them.	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page.* • Learning Activities – Follow *Teacher's Lesson Guide Volume 2* pages 690 - 765 for lesson activities • Include Math Stations to assist struggling and advanced learners **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather Routine and Temperature Routine. **ELA 8-1 – 8-12**	See page 680 of Teacher's Lesson Guide for instruction materials per lesson. • Activity Cards 99 – 110 • Number cards • Pattern blocks • Geoboards • Rubber bands • Ruler • Slate • Shape cards • Two-Dimensional Shapes Poster • 10-centimeter ruler • Scissors • Attribute cards • Fact Triangles • Straws • Twist ties • Base-10 blocks • Square pattern block • Toothpicks • Chart paper • Straightedge • Colored pencils • Inch ruler • Stick-on notes	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math & Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Partitioning Rectangles • Equal Groups and Arrays		8-10Play *Array Concentration* to practice finding the total number of objects in arrays and writing corresponding number models. 8-11Describe attributes of shapes, build polygons with trapezoids, and show fractions on a geoboard. 8-12Adminster Unit Assessments	*Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.* **ELA 8-1** TM 691. Students will read *The Greedy Triangle* by: Marilyn Burns (Scholastic Inc., 2008) and identify attributes of shapes. **Art 8-2** TM 697. Students will use Attribute Cards to draw shapes. **ELA 8-3** TM 703. Students will read *Shape Up* by David Adler (Holiday House, 2008) and practice building shapes with specific attributes. **ELA 8-8** TM 737. Students will write number stories for equal groups and arrays. **ELA 8-8** TM 737. Students will read *Each Orange Had 8 Slices: A Counting Book* by Paul Giganti Jr. (Greenwillow Books, 1999) and answer the questions posed in the book to practice with equal groups. **ELA 8-10** TM 749. Read *One Hundred Hungry Ants* by	• 3-d shapes • Centimeter cubes • Everything Math Deck • Number grid • Pattern-Block Template • Index cards • Calculator • Counters • Large paper triangle • 6-sided dice • 20-sided polyhedral die • Trapezoid pattern blocks • *Array Concentration* Array Cards • Tape • glue	synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
			Elinor Pinszes (Sandpiper, 1999). Review all the different arrays into which the ants arranged themselves. Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf		nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment Activities	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 8 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 8 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 8 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 8-1 Sorting Pattern Blocks (TM 691) 8-2 Identifying Attributes (TM 697) 8-3 Playing Touch and Match with Shapes (TM 703) 8-5 Identifying Pattern-Block Template Shapes (TM 719) 8-6 Covering Surfaces with Nonstandard Units (TM 725) 8-7 Covering More Surfaces with Nonstandard Units (TM 731) 8-8 Making Equal Rows (TM 737) 8-9 Connecting Arrays and Equal Groups (TM 743) 8-10Arrays in Literature (TM 749) 8-11Showing Equal Parts (TM 755)	**Enrichment Activities** 8-1 Solving Shape Riddles (Activity Card 99) 8-2 Comparing Shapes (TM 697) 8-3 Solving Shape Riddles (Activity Card 99) 8-5 Describing Faces on a Cube (TM 719) 8-6 Partitioning Rectangles without Tools (TM 725) 8-7 Partitioning Polygons (TM 731) 8-8 Writing Number Stories for Equal Groups and Arrays (TM 737) 8-9 Solving Equal-Groups and Array Riddles (TM 743) 8-10Exploring Square Numbers (Activity Card 105) 8-11Sorting Shape Words (TM 755)	*See Readiness Activities, Enrichment Activities and Extra Practice Activities 8-1 Preteach the terms *side, straight, parallel, angle,* and *vertex.* 8-2 Use role play to introduce the word *capture.* 8-3 Contrast the term *in common* with the term *different*. 8-5 To introduce the mathematical meaning of the term, *face*, show a variety of solids with facial features drawn on their faces. 8-6 Use think-alouds and folding activities to demonstrate the meaning of *partition* and connect it to the term *parts.* 8-7 Introduce the adjective *same-size* using stick-on notes of different sizes and colors. Show how stick-on notes of the same size cover each other exactly, regardless of color. 8-8 Provide children with physical experiences to reinforce their understanding of the terms *column* and *row*. 8-9 Use the term *array* to describe items students may have seen in everyday life. 8-10Use concrete examples of equal groups of objects to illustrate the term *equal addends.* 8-11Scaffold the vocabulary needed to participate in Exploration A by having	**Readiness Activities** 8-1 Sorting Pattern Blocks (TM 691) 8-2 Identifying Attributes (TM 697) 8-3 Playing Touch and Match with Shapes (TM 703) 8-5 Identifying Pattern-Block Template Shapes (TM 719) 8-6 Covering Surfaces with Nonstandard Units (TM 725) 8-7 Covering More Surfaces with Nonstandard Units (TM 731) 8-8 Making Equal Rows (TM 737) 8-9 Connecting Arrays and Equal Groups (TM 743) 8-10Arrays in Literature (TM 749) 8-11Showing Equal Parts (TM 755)

		children draw pictures on the back of cards that name shapes or shape attributes.	
Extra Practice Activities 8-1 Indentifying Attribute of Shapes (Activity Card 100) 8-2 Drawing Shapes (Activity Card 101) 8-3 Making Shapes (Activity Card 102) 8-5 Sorting Shapes (Activity Card 103) 8-6 Partitioning Rectangles into Squares (TM 725) 8-7 Partitioning Rectangles (TM 731) 8-8 Equal Groups in Literature (TM 737) 8-9 Finding Equal Groups and Arrays (Activity Card 104) 8-10*Array Bingo* (Activity Card 106) 8-11Making My Shape (Activity Card 110)		**Unit 8 Vocabulary:** Angle; apex; array; attribute; column, row; cube; equal groups; face; parallel; parallel sides; partition; polygon; quadrilateral; right angle; side; vertex	**Extra Practice Activities** 8-1 Indentifying Attribute of Shapes (Activity Card 100) 8-2 Drawing Shapes (Activity Card 101) 8-3 Making Shapes (Activity Card 102) 8-5 Sorting Shapes (Activity Card 103) 8-6 Partitioning Rectangles into Squares (TM 725) 8-7 Partitioning Rectangles (TM 731) 8-8 Equal Groups in Literature (TM 737) 8-9 Finding Equal Groups and Arrays (Activity Card 104) 8-10*Array Bingo* (Activity Card 106) 8-11Making My Shape (Activity Card 110)

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 2

Unit #: **UNIT 9 OVERVIEW** **Unit Title:** Equal Shares and Whole Number Operations

Unit Description and Objectives:

9-1 **Creating and Naming Equal Parts** – Students divide shapes and use fraction vocabulary to name the shares. Students will reason with shapes and their attributes.

9-2 **Exploring Equal Shares, Pattern-Block Fractions, and Number Lines** – Students explore equal shares of different shapes, use pattern blocks to divide shapes, and make a number line. Students will relate addition and subtraction to length. Students will reason with shapes and their attributes.

9-3 **Sharing Muffins** – Day 1 Students decide how to share muffins equally and use words to name the shares. Day 2 – Students discuss select drawings and names, and revise their work. Students will reason with shapes and their attributes.

9-4 **Fractional Units of Length** – Students measure lengths to the nearest half-inch. Students will measure and estimate lengths in standard units. Students will relate addition and subtraction to length.

9-5 **Reviewing Place Value** – Students write multi-digit numbers in expanded form and compare them. Students will understand place value.

9-6 **Expand-and-Trade Subtraction, Part 1** – Students use base-10 blocks to solve subtraction problems. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

9-7 **Expand-and-Trade Subtraction, Part 2** – Students use expand-and-trade subtraction to subtract multi-digit numbers. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

9-8 **Equivalent Money Amounts** – Students practice finding coin and bill combinations with equivalent values and using cents and dollars-and-cents notation. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract. Students will work with time and money.

9-9 **Estimating Costs** – Day 1 – Students select items from a store poster and use mental math to estimate the total cost. Day 2 – Students discuss selected children's estimates, and students revise their work. Students will represent and solve problems involving addition and subtraction. Students will use place value understanding and properties of operations to add and subtract.

9-10 **Connecting Doubles Facts, Even Numbers, and Equal Groups** – Students solve number stories about 2 equal groups. Students will represent and solve problems involving addition and subtraction. Students will add and subtract within 20. Students will work with equal groups of objects to gain foundations for multiplication.

9-11 **Multiples of 10 and 5** – Students skip count and add to solve problems involving multiples of 10 and 5. Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

9-12 **Unit 9 Progress Check** – Day 1 – Students complete the Unit Assessments. Day 2 – Students complete the Open Response Assessment.

Essential Questions and Enduring Understandings:

Essential Questions:	Enduring Understandings/Generalizations Students will understand that:	Guiding Questions
1. How can I partition a circle or a rectangle?	1. Circles and rectangles can be partitioned in halves, thirds, fourths and quarters, which create smaller shares of the whole. Equal shares can be different shapes within the same whole.	1.1 How can I divide circles and rectangles into equal parts? 1.2 How do I name the equal parts? 1.3 How do I compare equal parts of different shapes?
2. What is an effective way to estimate numbers?	2. Some real world situations involve repeated addition and/or arrays and can be solved using multiplication.	2.1 How can estimation strategies help us build our addition skills? 2-2 When will estimating be helpful to us? 2-3 How can benchmark numbers help us add and subtract?
3. What is a standard procedure for subtracting two digit numbers?	3. The standard algorithm for subtracting two digit and two-digit numbers is just an extension of the algorithm for subtracting two-digit and one-digit numbers.	3.1 Why is knowing basic facts important to solving 2 digit problems? 3.2 Why is understanding place value important to solving 2 digit problems? 3.3 How do I use 2 digit addition and subtraction to find the missing value? 3.4 How do you set up a subtraction problem? 3.5 How do you subtract with regrouping?
4. What are different ways to express 3 digit numbers?	4. A 3 digit number is made up of ones, tens, and hundreds and can be expressed in different forms?	4.1 What are different ways to write numbers? 4.2 How does knowing the place value of a number determine its value? 4.3 How can I use what I know about place and value to determine the worth of a given number? 4.4 What is expanded form of a number?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Partition shapes into 2, 3, or 4 same-size parts.

Sub-Concept/Topics:

Extend the understanding of equal shares by exploring the idea that equal shares must be the same size, but not necessarily the same shape.

Sub-Concept/Topics:

Review place value for 3-digit numbers.

Theme:

Equal Shares and Whole Number Operations

Conceptual Lens:

See pages 766 – 777 of Teacher's Lesson Guide Volume 2

Sub-Concept/Topics:

Apply an understanding of place value to learn a new subtraction strategy called *expand-and-trade subtraction.*

Sub-Concept/Topics:

. Review the values of pennies, nickels, dimes and quarters. Make exchanges among coins.

Sub-Concept/Topics:

Solve number stories about the total number of objects in two equal groups or rows and writing addition number models to represent the stories.

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics 4 - Grade 2
Unit Number/Title: Unit 9 / Equal Shares and Whole Number Operations
Conceptual Lens: Equal Shares and Whole Number Operations
Appropriate Time Allocation (# of Days)**:** 15 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
2.OA.1	2.OA.2	2.OA.3	2.OA.4
2.NBT.1 2.NBT.3	2.NBT.4 2.NBT.5	2.NBT.6 2.NBT.7	2.NBT.8 2.NBT.9
2.G.3	2.MD.1	2.MD.4	2.MD.6

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know:)**	**Skill Objectives (Students Will Be Able To:)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
In Unit 9, shapes are partitioned into equal shares and these ideas are applied to further explore length measurement. New subtraction strategies based on place value are learned. Student learning will focus on: • Operations and Algebraic Thinking (Work with equal groups of objects to gain foundations for multiplication) • Number and Operations in Base Ten (Understand place value. Use place value understanding and properties of operations to add and subtract. • Geometry (Reason with shapes and their attributes)	• A part of a partitioned figure is called a share • When shares are all the same size they are called equal shares • Shares must be the same size but not necessarily the same shape • The name of equal shares by using fraction words such as one-half, one-third and 1out of 4 parts • The name of a whole using words such as two-halves, three-thirds, and four-fourths • To represent 3-digit numbers a variety of ways • To apply place value knowledge to subtract using expand-and-trade strategy	9-1 Divide shapes and use fraction vocabulary to name the shares. 9-2 Explore equal shares of different shapes, use pattern blocks to divide shapes, and make a number line. 9-3 Day 1 – Decide how to share muffins equally and use words to name the share. Day 2 – Discuss selected drawings and names, and revise work. 9-4 Measure lengths to the nearest half inch. 9-5 Write multi-digit numbers in expanded form and compare them. 9-6 Use base-10 blocks to solve subtraction problems. 9-7 Use expand-and-trade subtraction to subtract multi-digit numbers. 9-8 Practice finding coin and bill combinations with equivalent values and using cents and	*Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the second page of each lesson for these instructional learning activities. They are also listed on the following page* • Learning Activities – Follow *Teacher's Lesson Guide Volume 2* pages 778 - 859 for lesson activities • Include Math Stations to assist struggling and advanced learners **Science – Every Lesson** – See TM pages 24 – 37 to implement the Weather Routine and Temperature Routine. **ELA 9-1 – 9-12**	See page 768 of Teacher's Lesson Guide for instruction materials per lesson. • Activity Card 111 – 120 • Geoboard • Rubber bands • Pattern blocks • Base-10 blocks • Number cards • Calculator • Toolkit coins • Toolkit bills • Counters • Class number line • Paper squares • Class Data Pad • Chart paper • *Array Concentration* Array Cards • Circle template • Colored construction paper • Scissors • Slates	Everyday Math online: http://connected.mcgraw-hill.com/connected/ 8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 – Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually to collaborate and to create and communicate knowledge. Students will: • Understand and use technology systems • Select and use applications effectively and productively. • Plan strategies to guide inquiry. • Locate, organize, analyze, evaluate,	8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	**Formative Assessments:** • Math Message • Mental Math & Fluency • Math Boxes • Use of White Board • Questions & Answers • Think, Pair, Share • Home Links • Math Journals • Math Masters • Math Games • Teacher Observation **Summative Assessment(s)** • Unit Progress Check – Self Assessment, Written Assessment and Open Response Assessment • District Benchmarks • STAR

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Unit 9 will focus on the following Topics / Concepts: • Equal Shares • Place Value and Subtraction • Money • Multiples of 2, 5, and 10	• Coins can be exchanged for equal value and combined to purchase items • The total number of objects in two equal groups is always even • Doubles addition facts and even numbers relate to find multiples of 2	dollars-and-cents notation. 9-9 Day 1 -Select items from a store poster and use mental math to estimate the total cost. Day 2 – Discuss selected children's estimates, and revise their work. 9-10Solve number stories about 2 equal groups. 9-11Skip count and add to solve problems involving multiples of 10 and 5. 9-12Unit 9 Progress Check	*Teacher models and reviews key vocabulary terms.* *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson* *Each Unit provides students with the opportunity to answer open ended response questions.* **ELA/ Art 9-1** TM 779. Students will read *Ed Emberlley's Picture Pie: A Cut and Paste Drawing Book* by Ed Emberley (Little, Brown and Company, 2006). To apply their understanding of names for equal parts, they will trace circles of different sizes and fold them to divide them into equal parts. They will create their own circle designs. **Career Education/Consumer, Family & Life Skills 9-8** TM 827 – Students will plan and shop for food for a picnic. TM 830 – Students will select items to buy and calculate the cost. **Career Education/Consumer, Family & Life Skills 9-9** TM 832 - 839 – Students will select items from a store poster and use mental math to estimate the total cost.	• Pattern-block template • 2-3 paper strips • Fact Triangles • Scissors • 15 cut out circles • 12 inch ruler • 3 inch paper strip • Attribute cards • Shape Cards • Quarter-sheets of paper • Stick-on notes • Number grid • Large poster board • Coins • Colored pencils	synthesize and ethically use information from a variety of sources and media. • Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the opportunity to apply and practice lesson concepts and skills.* *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions* 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1 Technology Education, Engineering, Design, Computational Thinking – Programming: All students will develop an understanding of the		• Addition and Subtraction Fact Quizzes

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
			Additional Literature Links: http://media2.k12.mhedu.com/repository/private_data/DOC/50001139/59/67.pdf		nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. Students will be able to understand: • The cultural, social, economical, and political effects of technology. • The influence of technology on history. • Apply the design process. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies.		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
Readiness Activities, Extra Practice Activities, Differentiation Support	Enrichment Activities	Vocabulary, Readiness Activities, Extra Practice Activities, Differentiation Support	Readiness Activities, Extra Practice Activities, Differentiation Support
*See Unit 9 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com		*See Unit 9 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com	*See Unit 9 Differentiating Lesson Activities online resource for differentiation support for children who need more scaffolding. http:// connected.mcgraw-hill.com
Readiness Activities 9-1 Partitioning Slates into Equal Parts (TM 779) 9-2 Folding Paper Pizzas (TM 785) 9-4 Comparing Lengths of Objects (TM 799) 9-5 Base-10 “Buildings” (Activity Card 17) 9-6 Trading with Base-10 Blocks (TM 811) 9-7 Trading with Base-10 Blocks (TM 819) 9-8 Finding Ways to Make a Dollar (TM 827) 9-10Modeling Two Equal Groups (TM 841) 9-11Counting on Calculators (TM 847)	**Enrichment Activities** 9-1 Naming Equal Parts Found in Literature (Activity Card 111) 9-2 Showing Fractions for One-Half (TM 785) 9-4 Measuring a Crooked Path (TM 799) 9-5 Exploring Place Value (TM 805) 9-6 Subtracting Multi-digit Numbers (Activity Card 116) 9-7 Exploring Subtraction Strategies (Activity Card 118) 9-8 Planning a Picnic (TM 827) 9-10A Paper Folding Problem (TM 841) 9-11Making Multiples (TM 847)	*See Readiness Activities, Enrichment Activities, and Extra Practice Activities 9-1 Teach children some everyday meanings of the term *share* using teacher modeling, think alouds, and commonly used classroom directions. 9-2 Provide additional experience with the following terms: *one-half, two-halves, one-third, three-thirds, one-fourth,* and *four fourths.* 9-4 Scaffold for children to understand the meaning of *nearest* by beginning with a contrast of *near* and *far.* 9-5 Review the terms *flats, long,* and *cube* as the names of base-10 blocks before introducing the term *thousand cube*. 9-6 To review the meaning of the term *trade*, present examples of trades using coins and bills. 9-7 Use role play to review the term *trade*. 9-8 Distinguish between the homophones *good buy* and *good-bye*. 9-10Build on children’s experiences with everyday examples of arrays, such as egg cartons and ice-cube trays. 9-11Use teacher modeling to help children understand that *multiply* refers to an action, whereas *multiple* refers to a number.	**Readiness Activities** 9-1 Partitioning Slates into Equal Parts (TM 779) 9-2 Folding Paper Pizzas (TM 785) 9-4 Comparing Lengths of Objects (TM 799) 9-5 Base-10 “Buildings” (Activity Card 17) 9-6 Trading with Base-10 Blocks (TM 811) 9-7 Trading with Base-10 Blocks (TM 819) 9-8 Finding Ways to Make a Dollar (TM 827) 9-10Modeling Two Equal Groups (TM 841) 9-11Counting on Calculators (TM 847)
Extra Practice Activities		**Unit 9 Vocabulary:**	**Extra Practice Activities**

9-1 Dividing Shapes into Equal Parts (TM 779) 9-2 Finding Equal Parts of Shapes (TM 785) 9-4 Drawing and Measuring to the Nearest Half-Inch (TM 799) 9-5 Playing *Number Top-It* (TM 805) 9-6 Subtracting with Base-10 Blocks (Activity Card 117) 9-7 Practicing Expand-and-Trade Subtraction (Activity Card 119) 9-8 Practicing with Equivalent Money Amounts (TM 827) 9-10Writing Number Stories with 2 Equal Groups (Activity Card 120) 9-11 Patterns in Multiples of 2, 5, and 10 (TM 847)		Ball park estimate; close-but-easier numbers; equal shares; expand-and-trade subtraction; four-fourths; fourth-inch; half-inch; multiple; one-fourth; one-half; one-quarter; one-third; precise; quarter-inch; reasonable; thousand cube; three-thirds; two-halves	9-1 Dividing Shapes into Equal Parts (TM 779) 9-2 Finding Equal Parts of Shapes (TM 785) 9-4 Drawing and Measuring to the Nearest Half-Inch (TM 799) 9-5 Playing *Number Top-It* (TM 805) 9-6 Subtracting with Base-10 Blocks (Activity Card 117) 9-7 Practicing Expand-and-Trade Subtraction (Activity Card 119) 9-8 Practicing with Equivalent Money Amounts (TM 827) 9-10Writing Number Stories with 2 Equal Groups (Activity Card 120) 9-11 Patterns in Multiples of 2, 5, and 10 (TM 847)

CROSS-CONTENT STANDARDS ANALYSIS

Course Title: Everyday Mathematics 4 **Grade:** 2

Unit Title:	Visual and Performing Arts	Comp. Health & Physical Ed.	English Language Arts	Mathematics	Science	Social Studies	World Languages	Technology	21st Century Life & Careers
Establishing Routines			*ELA is integrated in each lesson in every unit through vocabulary and writing responses.		*Science is integrated in each lesson in every unit during the Weather Routine and Temperature Routine	6.2..C.3.c 6.2.12.C6.d		8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	
Fact Strategies			W.2.2 SL.2.1 SL.2.3 L.2.1 L.2.4		5.4.2.F.1 5.4.4.F.1			8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	
More Fact Strategies			W.2.2 SL.2.1 SL.2.3 L.2.1 L.2.4		5.4.2.F.1 5.4.4.F.1			8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	
Place Value & Measurement			W.2.2 SL.2.1 SL.2.3 L.2.1 L.2.4		5.4.2.F.1 5.4.4.F.1			8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	
Addition and Subtraction			W.2.2 SL.2.1 SL.2.3 L.2.1 L.2.4		5.4.2.F.1 5.4.4.F.1	6.1.4.B.1		8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	
Whole Number Operations & Number Stories			W.2.2 SL.2.1 SL.2.3 L.2.1		5.4.2.F.1 5.4.4.F.1			8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1	

Unit Title:	Visual and Performing Arts	Comp. Health & Physical Ed.	English Language Arts	Mathematics	Science	Social Studies	World Languages	Technology	21st Century Life & Careers
			L.2.4					8.2.2.B.4 8.2.2.D.1	
Whole Number Operations & Measurement Data		2.5.2.A.1 2.5.2.B.1 2.5.2.C.1	W.2.2 SL.2.1 SL.2.3 L.2.1 L.2.4		5.4.2.F.1 5.4.4.F.1	6.1.4.B.1		8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	
Geometry & Arrays	1.3.2.D.1		W.2.2 SL.2.1 SL.2.3 L.2.1 L.2.4		5.4.2.F.1 5.4.4.F.1			8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	
Equal Shares & Whole Number Operations	1.3.2.D.1		W.2.2 SL.2.1 SL.2.3 L.2.1 L.2.4		5.4.2.F.1 5.4.4.F.1			8.1.2.A.1 8.1.2.A.4 8.1.2.E.1 8.2.2.B.1 8.2.2.B.4 8.2.2.D.1	

***All core content areas may not be applicable in a particular course.**

Washington Township Public Schools
Department of Student Personnel Services

CURRICULUM MODIFICATION

The regular curriculum is modified for Special Education students enrolled in both self-contained and resource center classes.

Modifications address individual learning rates, styles, needs and the varying abilities of all special populations served in the programs available in the district.

The intent is three-fold:

- To provide alternative materials, techniques and evaluation criteria to address the range of students' needs;
- To parallel the regular curriculum in skill, content sequence and coverage to prepare students for mainstreaming;
- To maximize students' potential for movement to less restrictive environments.

In the event there is a conflict between the prescribed curriculum and the IEP for an individual student, the IEP will take precedence and will constitute the individually prescribed proficiencies for the student.