Fourth Grade Mathematics

Chapter One: Place Value

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.NBT.1 -** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700÷70=10 by applying concepts of place value and division.*
- **4.NBT.2 -** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
- **4.NBT.3 -** Use place value understanding to round multi-digit whole numbers to any place.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.

Central Idea / Enduring Understanding:

Students will…

- use a place-value chart.
- use place value to write numbers in different ways.
- use place value to compare numbers.
- use place value to round numbers.
- use place value and the four-step plan to solve problems.

Essential/Guiding Question:

- How does place value help represent the value of numbers?

Content:

- Place Value
- Read and Write Multi-Digit Numbers
- Compare Numbers
- Order Numbers
- Use Place Value to Round
- Problem-Solving Investigation: Use the Four-Step Plan

Skills (Objectives):

- Identify the place value of digits in multi-digit numbers.
- Read and write multi-digit whole numbers.
- Compare numbers using a number line and a place-value chart.
- Order numbers by using a place-value chart and comparing the digit values.
- Estimate numbers by rounding.
- Use the four-step plan to solve problems.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

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NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 1 - Assessment
- Chapter 1 Performance Task

Formative Assessments:

- Exit Slip
- Response Cards
- Pair Share
- One-Sentence Summary
- Quick Draw
- One-Minute Essay
- Error Analysis
- Application Cards
- Summarize
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- n/a

Stage 3: Learning Plan

Learning Opportunities/Strategies:

Chapter Introduction

Objective: Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.

Chapter Introduction:

- Introduce the chapter by discussing the theme, “Our Great Outdoors”
- View online video to spark a discussion about how math is related to the great outdoors.
- Introduce the Essential Question: “How does place value help represent the value of numbers?”

Resources:

TE pg. 1

- TE/SE pg. 1
- Online Video
- TE/SE pg. 1

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Am I Ready? ● Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 3**
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 4** ● Review Vocabulary:hundreds, ten thousands, thousands, ones, tens
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 5-8** ● New Vocabulary: digit, expanded form, is equal to(=), is greater than(>), is less than (<), number line, period, place value
My Foldable ● This foldable helps students better understand place value.	**TE/SE pg. 9-10**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Place Value** **Objective:** Students will identify the place value of digits in multi-digit numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “How does place value help represent the value of numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 11A-11B** ● New Vocabulary: digit, place value
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 11B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “How does the value of a digit in the thousands place compare to its value if the same digit was in the hundreds place?” ● Independent Practice	**TE/SE pg. 11-13** ● Example 1 ● Assign On Level set: 5-16 (even), 17-20
Apply: ● Problem Solving	**TE/SE pg. 14**

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• Brain Builders	
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 15-16** • Response Cards, TE pg. 16 • SE pg. 15-16
Learning Opportunities/Strategies: **Lesson 2: Read and Write Multi-Digit Numbers** **Objective:** Students will read and write multi-digit whole numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How does place value help represent the value of numbers?" • Developing Vocabulary • Problem of the Day	**TE pg. 17A-17B** • New Vocabulary: period, standard form, expanded form, word form
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 17B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "What is the value of 6 in 345,629?" • Independent Practice	**TE/SE pg. 17-19** • Example 1 • Assign On Level set: 5-13 (odd), 14-18
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 20**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 21-22** • Exit Slip, TE pg. 22 • SE pg. 21-22
Learning Opportunities/Strategies: **Lesson 3: Compare Numbers** **Objective:** Students will compare numbers using a number line and a place-value chart.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How does place value help represent the value of numbers?" • Developing Vocabulary	**TE pg. 23A-23B** • New Vocabulary: is equal to (=), number line, is greater than (>), is less than (<)

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• Problem of the Day	• Work Mat 3: Place Value Chart
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 23B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "If two numbers have all of the same digits in the same places, can one of them be greater than the other? Explain." • Independent Practice	**TE/SE pg. 23-25** • Example 1 • Assign On Level set: 8-16 (even), 17-29
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 26**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 27-28** • Quick Draw, TE pg. 28 • SE pg. 27-28
Learning Opportunities/Strategies: **Lesson 4: Order Numbers** **Objective:** Students will order numbers by using a place-value chart and comparing the digit values.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How does place value help represent the value of numbers?" • Developing Vocabulary • Problem of the Day	**TE pg. 29A-29B** • Review Vocabulary: order
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 29B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "When ordering numbers, what do you do when the digits in the same place have the same value?" • Independent Practice	**TE/SE pg. 29-31** • Example 1 • Index Cards w/4 digit numbers from 1000-6000 • Assign On Level set: 3-9 (odd), 10-13
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 32**
Wrap Up: • Complete formative assessment	**TE pg. 33-34** • Error Analysis, TE pg. 34

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• Assign homework	• SE pg. 33-34
Learning Opportunities/Strategies: **Lesson 5: Use Place Value to Round**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will estimate numbers by rounding.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How does place value help represent the value of numbers?" • Developing Vocabulary • Problem of the Day	**TE pg. 37A-37B** • Review Vocabulary: number line, round
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 37B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "What is the least number that you can round to the thousands place to get 8,000? Explain. • Independent Practice	**TE/SE pg. 37-39** • Example 1 • Work Mat 3: Place Value • Assign On Level set: 5-17 (odd), 18-23
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 40**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 41-42** • Exit Slip, TE pg. 42 • SE pg. 41-42
Learning Opportunities/Strategies: **Lesson 6: Problem-Solving Investigation: Use the Four-Step Plan**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will use the four-step plan to solve problems.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How does place value help represent the value of numbers?" • Problem of the Day	**TE pg. 43A-43B**
Build: • Prepare • Learn the Strategy	• TE pg. 43B • TE/SE pg. 43

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Practice: ● Practice the Strategy	**TE/SE pg. 44**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 45-46** ● Assign On Level set: 1, 2, 4-8
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 47-48** ● Summarize, TE pg. 48 ● SE pg. 47-48
Learning Opportunities/Strategies: **Chapter 1 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: ● Review homework problems as needed.	**Student Homework Page**
Essential Question: ● Remind students of the Essential Question: "How does place value help represent the value of numbers?"	
Review: ● Vocabulary Check ● Concept Check ● Brain Builders	**TE/SE pg. 49** **TE/SE pg. 50** **TE/SE pg. 51**
Reflect: ● Complete the Graphic Organizer	**TE/SE pg. 52**
Assign homework:	**n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson.	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson.

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• Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	• Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	• Pair with on grade level or higher-achieving students to problem solve Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	• Pair with on grade level or higher-achieving students to problem solve Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide foundational support • Specific use of modalities - kinesthetic, visual, auditory, tactile • The multilingual eGlossary can support vocabulary Learning Station • My Learning Station student-led activity

Chapter Two: Add and Subtract Whole Numbers

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.OA.3 -** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- **4.OA.5 -** Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

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- **4.NBT.3 -** Use place value understanding to round multi-digit whole numbers to any place.
- **4.NBT.4 -** With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:

Students will…

- use place value to round numbers.
- add and subtract multi-digit whole numbers.
- solve word problems by writing an equation.
- use addition or subtraction to generate a number pattern.

Essential/Guiding Question:

- What strategies can I use to add or subtract?

Content:

- Addition Properties and Subtraction Rules
- Addition and Subtraction Patterns
- Add and Subtract Mentally
- Estimate Sums and Differences
- Add Whole Numbers
- Subtract Whole Numbers
- Subtract Across Zeros
- Problem-Solving Investigation: Draw a Diagram
- Solve Multi-Step Word Problems

Skills (Objectives):

- Use addition properties and subtraction rules to add and subtract.
- Use patterns to solve addition and subtraction problems.
- Use mental math to add and subtract.
- Estimate sums and differences of multi-digit numbers.
- Add multi-digit whole numbers.
- Subtract multi-digit whole numbers.
- Subtract multi-digit numbers, when some digits are zeros.
- Solve problems by drawing a diagram.
- Solve multi-step word problems using addition and subtraction.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
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NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
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- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

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- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

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- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
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- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 2 - Assessment
- Chapter 2 Performance Task

Formative Assessments:

- Example/Non-Example
- One-Minute Essay
- Summarize
- Think-Pair Share
- Sequence
- Definitions
- Number Sort
- Exit Slip
- Analogy Prompt
- Error Analysis
- Application Cards
- One-Sentence Summary
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: • Introduce the chapter by discussing the theme, “Let’s Watch the Show!” • View online video to spark a discussion about how math is used in entertainment, movies, theaters, and plays. • Introduce the Essential Question: “What strategies can I use to add or subtract?”	**TE pg. 53** • TE/SE pg. 53 • Online Video • TE/SE pg. 53
Am I Ready?	**TE/SE pg. 55**

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● Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 56** ● Review Vocabulary: difference, round, word form, estimate, sum
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 57-58** ● New Vocabulary: Associative Property of Addition, Commutative Property of Addition, equation, Identity Property of Addition, minuend, subtrahend, unknown, variable
My Foldable ● This foldable encourages students to fluently add and subtract multi-digit whole numbers.	**TE/SE pg. 59-60**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Addition Properties and Subtraction Rules** **Objective:** Students will use addition properties and subtraction rules to add and subtract.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “What strategies can I use to add or subtract?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 61A-61B** ● New Vocabulary: Associative Property of Addition, Commutative Property of Addition, Identity Property of Addition, unknown
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 61B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Which subtraction rule is like the opposite of the Identity Property of Addition? Explain your reasoning.” ● Independent Practice	**TE/SE pg. 61-63** ● Example 1 ● Assign On Level set: 5-19 (odd), 20-23
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 64**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 65-66** ● One Minute Essay, TE pg. 66 ● SE pg. 65-66
Learning Opportunities/Strategies: **Lesson 2: Addition and Subtraction Patterns** **Objective:** Students will use patterns to solve addition and subtraction problems.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 67A-67B** ● Review Vocabulary: pattern
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 67B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "What do you look for when you look for a number pattern?" ● Independent Practice	**TE/SE pg. 67-69** ● Example 1 ● Assign On Level set: 8-28 (even), 29-33
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 70**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 71-72** ● Think-Pair Share, TE pg. 72 ● SE pg. 71-72
Learning Opportunities/Strategies: **Lesson 3: Add and Subtract Mentally** **Objective:** Students will use mental math to add and subtract.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 73A-73B** ● Review Vocabulary: hundreds, tens, thousands
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 73B**

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Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Look at Exercise 3. Explain why you added 4 to the difference of 104 before writing the final answer." ● Independent Practice	**TE/SE pg. 73-75** ● Example 1 ● Assign On Level set: 4-12 (even), 14-21
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 76**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 77-78** ● Definitions, TE pg. 78 ● SE pg. 77-78
Learning Opportunities/Strategies: **Lesson 4: Estimate Sums and Differences** **Objective:** Students will estimate sums and differences of multi-digit numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 79A-79B** ● Review Vocabulary: estimate, difference
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 79B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Estimate 829 + 1,560 to the nearest hundred and the nearest thousand." ● Independent Practice	**TE/SE pg. 79-81** ● Example 1 ● Assign On Level set: 6-16 (even), 17-21
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 82**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 83-84** ● Exit Slip, TE pg. 84 ● SE pg. 83-84
Learning Opportunities/Strategies: **Lesson 5: Add Whole Numbers** **Objective:** Students will add multi-digit whole numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 87A-87B** ● Review Vocabulary: regroup
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 87B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain why it is important to line up digits in numbers when you add." ● Independent Practice	**TE/SE pg. 87-89** ● Example 1 ● Assign On Level set: 4-10 (even), 12-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 90**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 91-92** ● Analogy Prompt, TE pg. 92 ● SE pg. 91-92
Learning Opportunities/Strategies: **Lesson 6: Subtract Whole Numbers** **Objective:** Students will subtract multi-digit whole numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 93A-93B** ● New Vocabulary: minuend, subtrahend
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 93B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to check the answer to a subtraction problem by using addition." ● Independent Practice	**TE/SE pg. 93-94** ● Example 1 ● Assign On Level set: 3-11 (odd), 12-18

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 96**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 97-98** ● Application Cards, TE pg. 98 ● Index Cards ● SE pg. 97-98
Learning Opportunities/Strategies: **Lesson 7: Subtract Across Zeros** **Objective:** Students will subtract multi-digit numbers, when some digits are zeros.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 99A-99B** ● Review Vocabulary: minuend, regroup, subtrahend
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 99B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to subtract 42,956 from 55,000." ● Independent Practice	**TE/SE pg. 99-101** ● Example 1 ● Assign On Level set: 4-12 (even), 13-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 102**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 103-104** ● Think-Pair Share, TE pg. 104 ● SE pg. 103-104
Learning Opportunities/Strategies: **Lesson 8: Problem-Solving Investigation: Draw a Diagram** **Objective:** Students will solve problems by drawing a diagram.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Problem of the Day	**TE pg. 107A-107B**

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Build: ● Prepare ● Learn the Strategy	● TE pg. 107B ● TE/SE pg. 107
Practice: ● Practice the Strategy	**TE/SE pg. 108**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 109-110** ● Assign On Level set: 1-8
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 111-112** ● Definition, TE pg. 112 ● SE pg. 111-112
Learning Opportunities/Strategies: **Lesson 9: Solve Multi-Step Word Problems**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will solve multi-step word problems using addition and subtraction.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 113A-113B** ● New Vocabulary: equation, variable
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 113B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Can you use any letter of the alphabet for a variable? Explain." ● Independent Practice	**TE/SE pg. 113-115** ● Example 1 ● Assign On Level set: 2-9
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 116** ● Number Cube
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 117-118** ● One Sentence Summary, TE pg. 118 ● SE pg. 117-118
Learning Opportunities/Strategies: **Chapter 2 Review and Reflect**	**Resources:**
Objective: Assess students' understanding of the vocabulary and key concepts in this chapter.	

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Review Homework: ● Review homework problems as needed. **Essential Question:** ● Remind students of the Essential Question: "What strategies can I use to add or subtract?" **Review:** ● Vocabulary Check ● Concept Check ● Brain Builders **Reflect:** ● Complete the graphic organizer. **Assign homework:** ● Fluency Practice	**Student Homework Page** **TE/SE pg. 121** **TE/SE pg. 122** **TE/SE pg. 123** **TE/SE pg. 124** **TE/SE pgs. 119-120**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to

	• Utilize the McGraw Hill English Language Learner Guide to provide	demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide foundational support • Specific use of modalities - kinesthetic, visual, auditory, tactile • The multilingual eGlossary can support vocabulary Learning Station • My Learning Station student-led activity

Chapter Three: Understand Multiplication and Division

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.OA.1 -** Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
- **4.OA.2 -** Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
- **4.OA.4 -** Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.
- **4.NBT.5 -** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.NBT.6 -** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

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Central Idea / Enduring Understanding:
Students will…
- use rectangular arrays to write multiplication and division sentences.
- use subtraction to solve a division problem.
- solve comparison problems.
- use properties of multiplication to solve problems.
- find factor pairs and multiples of whole numbers.

Essential/Guiding Question:
- How are multiplication and division related?

Content:
- Relate Multiplication and Division
- Relate Division and Subtraction
- Multiplication as Comparison
- Compare to Solve Problems
- Multiplication Properties and Division Rules
- The Associative Property of Multiplication
- Factors and Multiples
- Problem-Solving Investigation: Reasonable Answers

Skills (Objectives):
- Understand how multiplication and division are related.
- Relate division and subtraction.
- Recognize the comparison of two groups as another strategy to use when multiplying.
- Use comparison to solve problems.
- Use multiplication properties and division rules.
- Use the Associative property of Multiplication to solve problems.
- Find factors and multiples of whole numbers.
- Check answers for reasonableness.

Interdisciplinary Connection(s):

NJSLS for Literacy
- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies
- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science
- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills
- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

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Stage 2: Assessment Evidence

Diagnostic Assessment:
- Am I Ready?

Formative Assessments:
- Quick Draw
- Analogy Prompt
- Exit Slip
- Application Cards
- Response Cards
- Summarize
- Think-Pair Share
- Definition
- One-Minute Essay
- Sequence
- One-Sentence Summary
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:
- My Review
- Reflect
- Chapter 3 - Assessment
- Chapter 3 Performance Task

Benchmark Assessment:
- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: ● Introduce the chapter by discussing the theme, “My World of Fun”. ● View online video to spark a discussion about how math is used in festivals, games, parties, and other fun events. ● Introduce the Essential Question: “ How are multiplication and division related?”	**TE pg. 125** ● TE/SE pg. 125 ● Online Video ● TE/SE pg. 125
Am I Ready? ● Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 127**
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 128** ● Review Vocabulary: divide, multiply
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 129-132** ● New Vocabulary: Associative Property of Multiplication, Commutative Property of Multiplication, decompose, dividend, divisor, fact family, factor, Identity Property of Multiplication, multiple, product, quotient, repeated subtraction, Zero Property of Multiplication

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My Foldable ● This foldable provides practice with factors and multiples of whole numbers.	**TE/SE pg. 133-134**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Relate Multiplication and Division**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will use multiplication properties and division rules.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are multiplication and division related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 135A-135B** ● New Vocabulary: dividend, divisor, factor, product, quotient, fact family
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 135B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "How are multiplication and division related?" ● Independent Practice	**TE/SE pg. 135-137** ● Counters ● Example 1 ● Assign On Level set: 5-8, 10-15
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 138**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 139-140** ● Analogy Prompt, TE pg. 140 ● SE pg. 139-140
Learning Opportunities/Strategies: **Lesson 2: Relate Division and Subtraction**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will relate division and subtraction.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are multiplication and division related?" ● Developing Vocabulary	**TE pg. 141A-141B**

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• Problem of the Day	• Review Vocabulary: repeated subtraction
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 141B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Describe how to use subtraction to find 16 ÷ 4 without using a number line." • Independent Practice	**TE/SE pg. 141-143** • Colored pencils • Example 1 • Assign On Level set: 3-13 (odd), 15-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 144**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 145-146** • Application Cards, TE pg. 146 • SE pg. 145-146
Learning Opportunities/Strategies: **Lesson 3: Multiplication as Comparison** **Objective:** Students will recognize the comparison of two groups as another strategy to use when multiplying.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How are multiplication and division related?" • Developing Vocabulary • Problem of the Day	**TE pg. 147A-147B** • Review Vocabulary: bar diagram
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 147B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "One way to interpret 24 = 8 x 3 is to say that 24 is 8 times as many as 3. What is another way you can interpret this equation?" • Independent Practice	**TE/SE pg. 147-149** • Counters • Example 1 • Assign On Level set: 3-11 (odd), 14-16
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 150**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 151-152** • Response Cards, TE pg. 152 • SE pg. 151-152

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Learning Opportunities/Strategies:	Resources:
Lesson 4: Compare to Solve Problems	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will use comparison to solve problems.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 153A-153B**
● Remind students of the Essential Question: "How are multiplication and division related?"	
● Developing Vocabulary	● Review Vocabulary: divide, multiply, add, compare, subtract
● Problem of the Day	
Build:	**TE pg. 153B**
● Investigate the Math: Explore, Model, Extend	
Practice:	**TE/SE pg. 153-155**
● Math in My World	● Example 1
● Guided Practice	
● Talk Math ○ Students turn and talk: "How can unknown numbers be represented in equations?"	
● Independent Practice	● Assign On Level set: 3, 5-15
Apply:	
● Problem Solving	**TE/SE pg. 156**
● Brain Builders	
Wrap Up:	
● Complete formative assessment	**TE pg. 157-158**
● Assign homework	● Application Cards, TE pg. 158 ● SE pg. 157-158
Learning Opportunities/Strategies:	**Resources:**
Lesson 5: Multiplication Properties and Division Rules	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will use multiplication properties and division rules.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 161A-161B**
● Remind students of the Essential Question: "How are multiplication and division related?"	
● Developing Vocabulary	● New Vocabulary: Commutative Property of Multiplication, Identity Property of Multiplication, Zero Property of Multiplication
● Problem of the Day	
Build:	**TE pg. 161B**
● Investigate the Math: Explore, Model, Extend	
Practice:	**TE/SE pg. 161-163**
● Math in My World	● Example 1

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• Guided Practice • Talk Math ○ Students turn and talk: “Explain why the Identity Property of Multiplication uses 1 while the Identity Property of Addition uses 0.” • Independent Practice	• Assign On Level set: 4-12 (even), 13-17
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 164**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 165-166** • Analogy Prompt, TE pg. 166 • SE pg. 165-166
Learning Opportunities/Strategies: **Lesson 6: The Associative Property of Multiplication** **Objective:** Students will use the Associative Property of Multiplication to solve problems.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: “How are multiplication and division related?” • Developing Vocabulary • Problem of the Day	**TE pg. 167A-167B** • New Vocabulary: Associative Property of Multiplication
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 167B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Identify the order that makes it easier to multiply the factors in 9 x 4 x 2. Explain.” • Independent Practice	**TE/SE pg. 167-169** • Example 1 • Assign On Level set: 5-19 (odd), 21-24
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 170**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 171-172** • Think-Pair-Share, TE pg. 172 • SE pg. 171-172
Learning Opportunities/Strategies: **Lesson 7: Factors and Multiples** **Objective:** Students will find factors and multiples of whole numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are multiplication and division related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 173A-173B** ● New Vocabulary: decompose, multiple
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 173B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how factors and multiples are related." ● Independent Practice	**TE/SE pg. 173-175** ● Example 1 ● Assign On Level set: 8-10, 14-23
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 176**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 177-178** ● One Minute Essay, TE pg. 178 ● SE pg. 177-178
Learning Opportunities/Strategies: **Lesson 8: Problem-Solving Investigation: Reasonable Answers**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will check answers for reasonableness.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are multiplication and division related?" ● Problem of the Day	**TE pg. 179A-179B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 179B ● TE/SE pg. 179
Practice: ● Practice the Strategy	**TE/SE pg. 180**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 181-182** ● Assign On Level set: 2, 3, 5-7
Wrap Up: ● Complete formative assessment	**TE pg. 183-184** ● One Sentence Summary, TE pg. 184

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● Assign homework **Learning Opportunities/Strategies:** **Chapter 3 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter. **Review Homework:** ● Review homework problems as needed. **Essential Question:** ● Remind students of the Essential Question: "How are multiplication and division related" **Review:** ● Vocabulary Check ● Concept Check ● Brain Builders **Reflect:** ● Complete the graphic organizer. **Assign homework:**	● SE pg. 183-184 **Resources:** **Student Homework Page** **TE/SE pg. 185** **TE/SE pg. 186** **TE/SE pg. 187** **TE/SE pg. 188** **n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path

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Learner Guide to provide	to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station ● My Learning Station student-led activity

Chapter Four: Multiply with One-Digit Numbers

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.NBT.1 -** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*
- **4.NBT.3 -** Use place value understanding to round multi-digit whole numbers to any place.
- **4.NBT.5 -** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

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Central Idea / Enduring Understanding:

Students will…

- multiply by multiples of 10, 100, and 1,000.
- use rounding to estimate products.
- use models to multiply by one-digit numbers.
- use the Distributive Property to find the product of two numbers.
- multiply a 1-digit number by a 3 - or 4 -digit number.

Essential/Guiding Question:

- How can I communicate multiplication?

Content:

- Multiples of 10, 100, and 1,000
- Round to Estimate Products
- Hands On: Use Place Value to Multiply
- Hands On: Use Models to Multiply
- Multiply by a Two-Digit Number
- Hands On: Model Regrouping
- The Distributive Property
- Multiply with Regrouping
- Multiply by a Multi-Digit Number
- Problem-Solving Investigation:
- Estimate or Exact Answer
- Multiply Across Zeros

Skills (Objectives):

- Multiply multiples of 10, 100, and 1,000 using basic facts and patterns.
- Estimate products by rounding.
- Explore multiplication using models.
- Explore multiplication using area models and partial products.
- Multiply a two-digit number by a one-digit number.
- Explore multiplication with regrouping using models.
- Use the Distributive Property to make multiplication easier.
- Multiply a two-digit number by a one-digit number.
- Multiply a multi-digit number by a one-digit number.
- Determine if a problem needs an estimate or an exact answer.
- Multiply multi-digit numbers with zeros by a one-digit number.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

Fourth Grade Mathematics

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 4 - Assessment
- Chapter 4 Performance Task

Formative Assessments:

- Summarize
- Exit Slip
- Application Cards
- Error Analysis
- Turn to Your Partner
- One Minute Summary
- Sequence
- Think-Pair Share
- Example/Non-Example
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: ● Introduce the chapter by discussing the theme, “Let’s Go Shopping”. ● View online video to spark a discussion about how math is used in shopping. ● Introduce the Essential Question: “How can I communicate multiplication?”	**TE pg. 189** ● TE/SE pg. 189 ● Online Video ● TE/SE pg. 189
Am I Ready? ● Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 190**
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 192** ● Review Vocabulary: equation, factor, product
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 193-194** ● New Vocabulary: Distributive Property, partial products, regroup

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My Foldable ● This foldable provides four representations for multiplying whole numbers	**TE/SE pg. 195-196**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Multiples of 10, 100, and 1,000**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will multiply multiples of 10, 100, and 1,000 using basic facts and patterns.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I communicate multiplication?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 197A-197B** ● Review Vocabulary: multiples, patterns
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 197B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "What is the product of 4 and 5,000? Explain why there are more zeros in the product than in the factors in the problem." ● Independent Practice	**TE/SE pg. 197-199** ● Example 1 ● Highlighters or Markers ● Assign On Level set: 8-27
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 200**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 201-202** ● Exit Slip, TE pg. 202 ● SE pg.201-202
Learning Opportunities/Strategies: **Lesson 2: Round to Estimate Products**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will estimate products by rounding.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I communicate multiplication?" ● Developing Vocabulary	**TE pg. 203A-203B** ● Review Vocabulary: place value, round

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• Problem of the Day **Build:** • Investigate the Math: Explore, Model, Extend **Practice:** • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Which product is closer to the estimate of 1,600: 4 x 385 or 4 x 405? Explain." • Independent Practice **Apply:** • Problem Solving • Brain Builders **Wrap Up:** • Complete formative assessment • Assign homework **Learning Opportunities/Strategies:** **Lesson 3: Hands On: Use Place Value to Multiply** **Objective:** Students will explore multiplication using models. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How can I communicate multiplication?" • Problem of the Day **Build:** • Build It **Practice:** • Try It • Talk About It • Practice It **Apply:** • Apply It • Write About It **Wrap Up:** • Assign homework **Learning Opportunities/Strategies:** **Lesson 4: Hands On: Use Models to Multiply** **Objective:** Students will explore multiplication using area models and partial products.	**TE pg. 203B** **TE/SE pg. 203-203** • Example 1 • Assign On Level set: 6-18 **TE/SE pg. 206** **TE pg. 207-208** • Application Cards TE pg. 208 • SE pg.207-208 **Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 209A** **TE/SE pg. 209** • Base Ten Blocks **TE/SE pg. 210-211** • Base Ten Blocks **TE/SE pg. 212** **TE pg. 213-214** • SE pg. 213-214 **Resources:** **Follow corresponding Lesson Presentation Slides.**

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Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I communicate multiplication?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 215A** ● New Vocabulary: partial products
Build: ● Draw It	**TE/SE pg. 215** ● Grid Paper, Colored Pencils or Crayons
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 216-217** ● Counters, Paper Plates
Apply: ● Apply It ● Write About It	**TE/SE pg. 218**
Wrap Up: ● Assign homework	**TE pg. 219-220** ● SE pg. 219-220
Learning Opportunities/Strategies: **Lesson 5: Multiply by a Two-Digit Number**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will multiply a two-digit number by a one-digit number.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I communicate multiplication?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 223A-223B** ● New Vocabulary: partial products
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 223B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Suppose you found 99 as the product of 33 x 3. How can you check to see if your answer is reasonable?" ● Independent Practice	**TE/SE pg. 223-225** ● Example 1 ● Assign On Level set: 8-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 226**
Wrap Up: ● Complete formative assessment	**TE pg. 227-228** ● Exit Slip, TE pg. 228

Fourth Grade Mathematics

• Assign homework	• SE pg. 227-228
Learning Opportunities/Strategies: **Lesson 6: Hands On: Model Regrouping**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will explore multiplication with regrouping using models.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I communicate multiplication?" • Developing Vocabulary • Problem of the Day	**TE pg. 229A** • New Vocabulary: regroup
Build: • Build It	**TE/SE pg. 229** • Base Ten Blocks
Practice: • Try It • Talk About It • Practice It	**TE/SE pg. 230-231**
Apply: • Apply It • Write About It	**TE/SE pg. 232**
Wrap Up: • Assign homework	**TE pg. 233-234** • SE pg. 233-234
Learning Opportunities/Strategies: **Lesson 7: The Distributive Property**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will use the Distributive Property to make multiplication easier.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I communicate multiplication?" • Developing Vocabulary • Problem of the Day	**TE pg. 235A-235B** • New Vocabulary: Distributive Property
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 235B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "How can you use the Distributive Property or an Area model to find 3 x 24?"	**TE/SE pg. 235-237** • Example 1 • Grid Paper, Colored Pencils or Crayons

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• Independent Practice	• Assign On Level set: 6-16
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 238**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 239-240** • One Minute Summary, TE pg. 240 • SE pg. 239-240
Learning Opportunities/Strategies: **Lesson 8: Multiply with Regrouping** **Objective:** Students will multiply a two-digit number by a one-digit number.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How do I communicate multiplication?" • Developing Vocabulary • Problem of the Day	**TE pg. 241A-241B** • Review Vocabulary: factor, product, regroup
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 241B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how to find 6 x 37." • Independent Practice	**TE/SE pg. 241-243** • Example 1 • Base Ten Blocks • Grid Paper • Assign On Level set: 3-13 (odd), 15-20
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 244**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 245-246** • Think-Pair-Share, TE pg. 246 • SE pg. 245-246
Learning Opportunities/Strategies: **Lesson 9: Multiply by a Multi-Digit Number** **Objective:** Students will multiply a multi-digit number by a one-digit number.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I communicate multiplication?" • Developing Vocabulary	**TE pg. 247A-247B** • Review Vocabulary: partial products

Fourth Grade Mathematics

• Problem of the Day	
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 247B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain why it is a good idea to estimate answers to multiplication problems." • Independent Practice	**TE/SE pg. 247-249** • Example 1 • Grid Paper • Assign On Level set: 6-25
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 250**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 251-252** • Error Analysis, TE pg. 252 • SE pg. 251-252
Learning Opportunities/Strategies: **Lesson 10: Problem-Solving Investigation: Estimate or Exact Answer** **Objective:** Students will determine if a problem needs an estimate or an exact answer.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I communicate multiplication?" • Problem of the Day	**TE pg. 255A-255B**
Build: • Prepare • Learn the Strategy	• TE pg. 255B • TE/SE pg. 255
Practice: • Practice the Strategy	**TE/SE pg. 256**
Apply: • Apply the Strategy • Brain Builders • Review the Strategies	**TE/SE pg. 257-258** • Assign On Level set: 1-8
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 259-260** • Example/Non-Example, TE pg. 260 • SE pg. 259-260
Learning Opportunities/Strategies: **Lesson 11: Multiply Across Zeros**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will multiply multi-digit numbers with zeros by a one-digit number.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I communicate multiplication?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 261A-261B** ● Review Vocabulary: Distributive Property, estimate, multiply, partial products
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 261B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to find the product of 4 and 2,008." ● Independent Practice	**TE/SE pg. 261-263** ● Example 1 ● Assign On Level set: 5-13, 15-19
Apply: ● Brain Builders ● Review the Strategies	**TE/SE pg. 264**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 265-266** ● Exit Slip, TE pg. 266 ● SE pg. 265-266
Learning Opportunities/Strategies: **Chapter 4 Review and Reflect**	**Resources:**
Objective: Assess students' understanding of the vocabulary and key concepts in this chapter.	
Review Homework: ● Review homework problems as needed.	**Student Homework Page**
Essential Question: ● Remind students of the Essential Question: "How can I communicate multiplication?"	
Review: ● Vocabulary Check ● Concept Check ● Brain Builders	**TE/SE pg. 267** **TE/SE pg. 268** **TE/SE pg. 269**
Reflect: ● Complete the graphic organizer.	**TE/SE pg. 270**
Assign homework:	**n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

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High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to “Beyond Level” ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Utilize gradual release model ● Modify problem set to “On Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station

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			• My Learning Station student-led activity

Chapter Five: Multiply with Two-Digit Numbers

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.NBT.3 -** Use place value understanding to round multi-digit whole numbers to any place.
- **4.NBT.5 -** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.OA.3 -** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:

Students will…

- multiply by multiples of ten.
- estimate products of two-digit number.
- use the Distributive Property to find the product of two numbers.
- multiply two two-digit numbers.
- write and solve equations that have more than one operation.

Essential/Guiding Question:

- How can I multiply by a two-digit number?

Content:

- Multiply by Tens
- Estimate Products
- Hands On: Use the Distributive Property to Multiply
- Multiply by a Two-Digit Number
- Solve Multi-Step Word Problems
- Problem-Solving Investigation: Make a Table

Skills (Objectives):

- Use properties and algorithms to multiply by tens.
- Estimate products by rounding.
- Explore multiplying by two-digit numbers.
- Multiply two two-digit numbers.
- Use multiplication to solve multi-step word problems.
- Solve problems by making a table.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.

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- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
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NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 5 - Assessment
- Chapter 5 Performance Task

Formative Assessments:

- Sequence
- Questioning
- Exit Slip
- One Minute Essay
- Use Structure
- Quick Draw
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:

Chapter Introduction

Objective: Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.

Chapter Introduction:

- Introduce the chapter by discussing the theme, “Animals in My World”.
- View online video to spark a discussion about how math is used in studying animals.

Resources:

TE pg. 271

- TE/SE pg. 271
- Online Video

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● Introduce the Essential Question: “How can I multiply by a two-digit number?”	● TE/SE pg. 271
Am I Ready? ● Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 273**
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 274** ● Review Vocabulary: decompose, factor, equation, product
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 275-276** ● New Vocabulary: operation
My Foldable ● This foldable provides practice with estimating products.	**TE/SE pg. 277-278**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Multiply by Tens**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will use properties and algorithms to multiply by tens.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “How can I multiply by a two-digit number?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 279A-279B** ● Review Vocabulary: multiply
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 279B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Joey is finding 67 x 40. Explain why he can think of 67 x 40 as 67 x 4 10.” ● Independent Practice	**TE/SE pg. 279-281** ● Example 1 ● Assign On Level set: 5-15 (odd), 17-27
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 282**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 283-284** ● Questioning, TE pg. 284 ● SE pg. 283-284
Learning Opportunities/Strategies: **Lesson 2: Estimate Products** **Objective:** Students will estimate products by rounding.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I multiply by a two-digit number?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 285A-285B** ● Review Vocabulary: estimate
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 285B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how you know if an estimated product is greater than or less than the actual product." ● Independent Practice	**TE/SE pg. 285-287** ● Example 1 ● Grid Paper, Crayons ● Assign On Level set: 3-15 (odd), 17-22
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 288**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 289-290** ● One Minute Essay, TE pg. 290 ● SE pg. 289-290
Learning Opportunities/Strategies: **Lesson 3: Hands On: Use the Distributive Property to Multiply** **Objective:** Students will explore multiplying by two-digit numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I multiply by a two-digit number?" ● Problem of the Day	**TE pg. 293A**
Build: ● Build It	**TE/SE pg. 293** ● Grid Paper, Colored Pencils

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Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 294-295**
Apply: ● Apply It ● Write About It	**TE/SE pg. 296**
Wrap Up: ● Assign homework	**TE pg. 297-298** ● SE pg. 297-298
Learning Opportunities/Strategies: **Lesson 4: Multiply by a Two-Digit Number** **Objective:** Students will multiply two 2-digit numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I multiply by a two-digit number?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 299A-299B** ● Review Vocabulary: partial products
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 299B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain the steps needed to find the product of 56 and 23." ● Independent Practice	**TE/SE pg. 299-301** ● Example 1 ● Assign On Level set: 2-12 (even), 13, 14
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 302**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 303-304** ● Sequence, TE pg. 304 ● SE pg. 303-304
Learning Opportunities/Strategies: **Lesson 5: Solve Multi-Step Word Problems** **Objective:** Students will use multiplication to solve multi-step word problems.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 305A-306B**

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• Remind students of the Essential Question: "How can I multiply by a two-digit number?" • Developing Vocabulary • Problem of the Day	• New Vocabulary: operation
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 305B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain the steps needed to find the product of 56 and 23." • Independent Practice	**TE/SE pg. 305-307** • Example 1 • Assign On Level set: 3-9
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 308** • Number Cubes
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 309-310** • Application Cards, TE pg. 310 • SE pg. 309-310
Learning Opportunities/Strategies: **Lesson 6: Problem-Solving Investigation: Make a Table** **Objective:** Students will solve problems by making a table. **Review Homework:** Review homework problems as needed.	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I multiply by a two-digit number?" • Problem of the Day	**TE pg. 311A-311B**
Build: • Prepare • Learn the Strategy	• TE pg. 311B • TE/SE pg. 311
Practice: • Practice the Strategy	**TE/SE pg. 312**
Apply: • Apply the Strategy • Brain Builders • Review the Strategies	**TE/SE pg. 313-314** • Assign On Level set: 2-8 (even)
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 315-316** • Exit Slip, TE pg. 316 • SE pg. 315-316
Learning Opportunities/Strategies: **Chapter 5 Review and Reflect**	**Resources:**

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Objective: Assess students' understanding of the vocabulary and key concepts in this chapter. **Review Homework:** ● Review homework problems as needed. **Essential Question:** ● Remind students of the Essential Question: "How can I multiply by a two-digit number?" **Review:** ● Vocabulary Check ● Concept Check ● Brain Builders **Reflect:** ● Complete the graphic organizer. **Assign homework:**	 **Student Homework Page** **TE/SE pg. 317** **TE/SE pg. 318** **TE/SE pg. 319** **TE/SE pg. 320** **n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support

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	demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station ● My Learning Station student-led activity

Chapter Six: **Divide by a One-Digit Number**

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.NBT.1 -** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.
- **4.NBT.3 -** Use place value understanding to round multi-digit whole numbers to any place.
- **4.NBT.6 -** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.OA.3** - Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted . Represent these problems using equations with a letter standing for unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:	Essential/Guiding Question:
Students will… ● make a model for division. ● divide with and without remainders.	● How does division affect numbers?

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• estimate quotients. • divide mentally. • solve division problems that result in 2-, 3-, and 4-digit quotients.	
Content: • Divide Multiples of 10, 100, and 1,000 • Estimate Quotients • Hands On: Use Place Value to Divide • Problem-Solving Investigation: Make a Model • Divide with Remainders • Interpret Remainders • Place the First Digit • Hands On: Distributive Property and Partial Quotients • Divide Greater Numbers • Quotients with Zeros • Solve Multi-Step Word Problems	**Skills (Objectives):** • Use basic facts and patterns to divide mentally. • Estimate quotients using compatible numbers, basic facts, and place value. • Use place value and models to explore dividing by one-digit numbers. • Solve problems by making a model. • Divide with remainders and check using multiplication and addition. • Interpret what the remainder means in the context of a division problem. • Determine where to place the first digit when dividing. • Use the Distributive Property and partial quotients to divide. • Solve division problems with greater numbers. • Solve division problems that result in quotients that have zeros. • Solve multi-step word problems using more than one operation.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.

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- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:
- Am I Ready?

Summative Assessment:
- My Review
- Reflect
- Chapter 6 - Assessment
- Chapter 6 Performance Task

Formative Assessments:
- One Minute Essay
- Error Analysis
- Exit Slip
- Analogy Prompt
- Summarize
- Quick Draw
- Think-Pair Share
- Sequence
- Construct Arguments
- Graphic Organizer
- Questioning
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:
- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: • Introduce the chapter by discussing the theme, “Let’s Travel!” • View online video to spark a discussion about how math is used in traveling. • Introduce the Essential Question: “How does division affect numbers?”	**TE pg. 321** • TE/SE pg. 321 • Online Video • TE/SE pg. 321
Am I Ready? • Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 323**
My Math Words • Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 324** • Review Vocabulary: dividend, divisor, quotient
My Vocabulary Cards	**TE/SE pg. 325-326**

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● Introduce vocabulary words and complete “My Vocabulary Cards” activity. **My Foldable** ● This foldable provides practice with dividing by a one-digit number and the steps students should follow as they work through the examples. **Wrap Up** ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	● New Vocabulary: compatible numbers, partial quotients, remainder **TE/SE pg. 327-328** **Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Divide Multiples of 10, 100, and 1,000** **Objective:** Students will use basic facts and patterns to divide mentally. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: “How does division affect numbers?” ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “What basic fact will help you find the quotient of 4,200 and 7?” ● Independent Practice **Apply:** ● Problem Solving ● Brain Builders **Wrap Up:** ● Complete formative assessment ● Assign homework	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 329A-329B** ● Review Vocabulary: dividend, multiples **TE pg. 329B** **TE/SE pg. 329-331** ● Example 1 ● Assign On Level set: 8-10, 17-27 **TE/SE pg. 332** **TE pg. 333-334** ● Error Analysis, TE pg. 334 ● SE pg. 333-334
Learning Opportunities/Strategies: **Lesson 2: Estimate Quotients** **Objective:** Students will estimate quotients, using compatible numbers, basic facts, and place value. **Review Homework:** Review homework problems as needed. **Launch:**	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 335A-335B**

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• Remind students of the Essential Question: "How does division affect numbers?" • Developing Vocabulary • Problem of the Day	• New Vocabulary: compatible numbers
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 335B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how to estimate $4,782 ÷ 6." • Independent Practice	**TE/SE pg. 335-337** • Example 1 • Assign On Level set: 5-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 338**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 339-340** • Analogy Prompt, TE pg. 340 • SE pg. 339-340 • Multiplication Fact Table Master
Learning Opportunities/Strategies: **Lesson 3: Hands On: Use Place Value to Divide** **Objective:** Students will use place value and models to explore dividing by one-digit numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How does division affect numbers?" • Problem of the Day	**TE pg. 341A**
Build: • Build It	**TE/SE pg. 341** • Base-ten Blocks
Practice: • Try It • Talk About It • Practice It	**TE/SE pg. 342-343**
Apply: • Apply It • Write About It	**TE/SE pg. 344**
Wrap Up: • Assign homework	**TE pg. 345-346** • SE pg. 345-346 • Place-Value Models Manipulative Master

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Learning Opportunities/Strategies:	Resources:
Lesson 4: Problem-Solving Investigation: Make a Model	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will solve problems by making a model.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does division affect numbers?" ● Problem of the Day	**TE pg. 347A-347B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 347B ● Model Coins ● TE/SE pg. 347 ● Base Ten Blocks
Practice: ● Practice the Strategy	**TE/SE pg. 348**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 349-350** ● Assign On Level set: 2, 4-9
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 315-316** ● Quick Draw, TE pg. 352 ● SE pg. 351-352
Learning Opportunities/Strategies:	**Resources:**
Lesson 5: Divide with Remainders	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will divide with remainders and check using multiplication and addition.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does division affect numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 353A-353B** ● Review Vocabulary: division
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 353B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "When you divide a number by 6, can the remainder be 6? Explain." ● Independent Practice	**TE/SE pg. 353-354** ● Example 1 ● Base-Ten Blocks ● Assign On Level set: 6-19

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 356**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 357-358** ● Error Analysis, TE pg. 358 ● SE pg. 357-358
Learning Opportunities/Strategies: **Lesson 6: Interpret Remainders** **Objective:** Students will interpret what the remainder means in the context of a division problem.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does division affect numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 359A-359B** ● New Vocabulary: remainder
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 3259B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "What kind of information can you get from a remainder?" ● Independent Practice	**TE/SE pg. 359-361** ● Example 1 ● Assign On Level set: 3-9
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 362**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 363-364** ● Think-Pair-Share, TE pg. 364 ● SE pg. 363-364
Learning Opportunities/Strategies: **Lesson 7: Place the First Digit** **Objective:** Students will determine where to place the first digit when dividing.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does division affect numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 367A-367B** ● New Vocabulary: digit

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Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 367B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Estimation is one method that can be used to check division. Identify another method." ● Independent Practice	**TE/SE pg. 367-369** ● Example 1 ● Assign On Level set: 5-13
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 370**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 371-372** ● Sequence, TE pg. 372 ● SE pg. 371-372
Learning Opportunities/Strategies: **Lesson 8: Hands On: Distributive Property and Partial Quotients** **Objective:** Students will use the Distributive Property and partial quotients to divide.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does division affect numbers?" ● Problem of the Day	**TE pg. 373A**
Build: ● Build It	**TE/SE pg. 373**
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 374-375**
Apply: ● Apply It ● Write About It	**TE/SE pg. 376**
Wrap Up: ● Assign homework	**TE pg. 377-378** ● SE pg. 377-378
Learning Opportunities/Strategies: **Lesson 9: Divide Greater Numbers** **Objective:** Students will solve division problems with greater numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Review Homework: Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How does division affect numbers?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "How would you mentally determine the number of digits in the quotient for 795 ÷ 5?" ● Independent Practice **Apply:** ● Problem Solving ● Brain Builders **Wrap Up:** ● Complete formative assessment ● Assign homework	**Student Homework Page** **TE pg. 379A-379B** ● New Vocabulary: hundreds, ones, tens, thousands **TE pg. 379B** **TE/SE pg. 379-381** ● Example 1 ● Grid Paper ● Assign On Level set: 3-5, 9-16 **TE/SE pg. 382** **TE pg. 383-384** ● Exit Slip, TE pg. 384 ● SE pg. 383-384
Learning Opportunities/Strategies: **Lesson 10: Quotients with Zeros** **Objective:** Students will solve division problems that result in quotients that have zeros. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How does division affect numbers?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to find the quotient of 624 ÷ 3." ● Independent Practice **Apply:**	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 387A-387B** ● New Vocabulary: dividend, divisor, partial quotients, quotient, remainder **TE pg. 387B** **TE/SE pg. 387-389** ● Example 1 ● Assign On Level set: 5-10, 12-16 **TE/SE pg. 390**

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• Problem Solving • Brain Builders	
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 391-392** • Questioning, TE pg. 392 • SE pg. 391-392
Learning Opportunities/Strategies: **Lesson 11: Solve Multi-Step Word Problems** **Objective:** Students will solve multi-step word problems using more than one operation.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How does division affect numbers?" • Developing Vocabulary • Problem of the Day	**TE pg. 393A-393B** • New Vocabulary: equation, parentheses
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 393B**

Practice:
• Math in My World
• Guided Practice
  ○ **Climate Change Opportunity**
• Talk Math
  ○ Students turn and talk: "What kinds of words help you decide which operations to use?"
• Independent Practice
	TE/SE pg. 393-395
	• Example 1
	
	Climate Change Example:
	• Climate Change Word Problem
	
	• Assign On Level set: 3-7

Apply: • Problem Solving • Brain Builders	**TE/SE pg. 396**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 397-398** • Exit Slip, TE pg. 398 • SE pg. 397-398
Learning Opportunities/Strategies: **Chapter 6 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: • Review homework problems as needed.	**Student Homework Page**
Essential Question: • Remind students of the Essential Question: "How does division affect numbers?"	
Review: • Vocabulary Check	**TE/SE pg. 401**

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• Concept Check • Brain Builders **Reflect:** • Complete the graphic organizer. **Assign homework:**	**TE/SE pg. 402** **TE/SE pg. 403** **TE/SE pg. 404** **TE/SE pg. 399-400**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group • Utilize gradual release model • Modify problem set to "Beyond Level" • Focus on critical thinking questions at the end of the lesson. Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	Small Group • Utilize gradual release model • Modify problem set to "On Level" • Utilize "Reteach" problem-set to model questions. • Focus on critical thinking questions at the end of the lesson. Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	Small Group • Specific use of modalities - kinesthetic, visual, auditory, tactile • Utilize gradual release model • Modify problem set to "Approaching Level" • Utilize "Reteach" problem-set to model questions. • Focus on critical thinking questions at the end of the lesson. • Pair with on grade level or higher-achieving students to problem solve Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English	Small Group • Specific use of modalities - kinesthetic, visual, auditory, tactile • Utilize gradual release model • Modify problem set to "Approaching Level" • Utilize "Reteach" problem-set to model questions. • Focus on critical thinking questions at the end of the lesson. • Pair with on grade level or higher-achieving students to problem solve Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner

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		Language Learner Guide to provide	Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station ● My Learning Station student-led activity

Chapter Seven: **Patterns and Sequences**

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.OA.3 -** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- **4.OA.5 -** Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:	Essential/Guiding Question:
Students will… ● use addition and subtraction to describe and extend a number pattern. ● write observations about sequences. ● use equations to describe patterns. ● use the order of operations to find the value of an expression. ● use a table to show equations with more than one operation.	● How are patterns used in mathematics

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Content:	**Skills (Objectives):**
• Nonnumeric Patterns • Numeric Patterns • Sequences • Problem-Solving Investigation: Look for a Pattern • Addition and Subtraction Rules • Multiplication and Division Rules • Order of Operations • Hands On: Equations with Two Operations • Equations with Multiple Operations	• Describe nonnumeric growing and repeating programs. • Identify, describe, and extend numeric patterns. • Extend patterns and write observations about the patterns. • Look for a pattern to solve problems. • Find and use rules to write addition and subtraction equations. • Find and use rules to write multiplication and division equations. • Use the order of operations to solve problems. • Explore equations with two operations. • Use tables to recognize and write equations with two or more operations.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
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NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:	**Summative Assessment:**
• Am I Ready?	• My Review • Reflect

Fourth Grade Mathematics

	● Chapter 7 - Assessment ● Chapter 7 Performance Task
Formative Assessments: ● Application Cards ● Quick Draw ● Think-Pair Share ● Exit Slip ● One Minute Essay ● Application Cards ● Sequence ● Paraphrase ● Quick Write ● Questioning ● Definitions ● Talk Math ● Independent Practice ● Check My Progress	**Benchmark Assessment:** ● Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: ● Introduce the chapter by discussing the theme, “Patterns In Our World”. ● View online video to spark a discussion about how patterns are used in math. ● Introduce the Essential Question: “How are patterns used in mathematics?”	**TE pg. 405** ● TE/SE pg. 405 ● Online Video ● TE/SE pg. 405
Am I Ready? ● Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 407**
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 408** ● Review Vocabulary: equation, operations, unknown
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 409-410** ● New Vocabulary: input, nonnumeric pattern, output, pattern, rule, sequence, term
My Foldable ● This foldable provides practice with input/output tables.	**TE/SE pg. 411-412**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter

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Learning Opportunities/Strategies:	Resources:
Lesson 1: Nonnumeric Patterns **Objective:** Students will describe nonnumeric growing and repeating patterns. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How are patterns used in mathematics?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Make another observation about the pattern in Example 2." ● Independent Practice **Apply:** ● Problem Solving ● Brain Builders **Wrap Up:** ● Complete formative assessment ● Assign homework	**Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 413A-413B** ● New Vocabulary: nonnumeric pattern, pattern **TE pg. 413B** **TE/SE pg. 413-415** ● Example 1 ● Counters ● Connecting Cubes ● Assign On Level set: 5-11 **TE/SE pg. 416** **TE pg. 417-418** ● Quick Draw, TE pg. 418 ● SE pg. 417-418
Learning Opportunities/Strategies: **Lesson 2: Numeric Patterns** **Objective:** Students will identify, describe, and extend numeric patterns. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How are patterns used in mathematics?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 419A-419B** ● New Vocabulary: numeric pattern, rule **TE pg. 419B** **TE/SE pg. 419-421** ● Example 1

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○ Students turn and talk: "Describe a real-world example of a growing numeric pattern." ● Independent Practice	● Assign On Level set: 6-11, 14-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 422**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 423-424** ● Exit Slip, TE pg. 424 ● SE pg. 423-424
Learning Opportunities/Strategies: **Lesson 3: Sequences** **Objective:** Students will extend patterns and write observations about the pattern.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are patterns used in mathematics?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 425A-425B** ● New Vocabulary: sequence, term
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 425B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "How does the operation of a rule affect the terms of a sequence?" ● Independent Practice	**TE/SE pg. 425-427** ● Example 1 ● Assign On Level set: 6-16
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 428**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 429-430** ● One-Minute Essay, TE pg. 430 ● SE pg. 429-430
Learning Opportunities/Strategies: **Lesson 4: Problem-Solving Investigation: Look for a Pattern** **Objective:** Students will look for a pattern to solve problems.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**

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Launch: ● Remind students of the Essential Question: “How are patterns used in mathematics?” ● Problem of the Day	**TE pg. 431A-432B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 431B ● TE/SE pg. 431
Practice: ● Practice the Strategy	**TE/SE pg. 431**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 433-434** ● Assign On Level set: 1, 3, 4, 5, 7
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 435-436** ● Sequence, TE pg. 436 ● SE pg. 435-436
Learning Opportunities/Strategies: **Lesson 5: Addition and Subtraction Rules** **Objective:** Students will find and use rules to write addition and subtraction equations.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “How are patterns used in mathematics?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 439A-439B** ● New Vocabulary: input, output
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 439B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Explain what you should do if you test a number in an equation and it does not work.” ● Independent Practice	**TE/SE pg. 439-441** ● Example 1 ● Assign On Level set: 3-5, 7-15
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 442**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 443-444** ● Quick Write, TE pg. 444 ● SE pg. 443-444

Fourth Grade Mathematics

Learning Opportunities/Strategies:	Resources:
Lesson 6: Multiplication and Division Rules **Objective:** Students will find and use rules to write multiplication and division equations. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How are patterns used in mathematics?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "How are a rule and an equation alike? How are they different?" ● Independent Practice **Apply:** ● Problem Solving ● Brain Builders **Wrap Up:** ● Complete formative assessment ● Assign homework	**Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 445A-445B** ● Review Vocabulary: division, multiplication **TE pg. 445B** **TE/SE pg. 445-447** ● Example 1 ● Two-Column Chart (Input/Output Table) ● Assign On Level set: 5-15 **TE/SE pg. 448** **TE pg. 449-450** ● Application Cards, TE pg. 450 ● Index Cards ● SE pg. 449-450
Learning Opportunities/Strategies: **Lesson 7: Order of Operations** **Objective:** Students will use the order of operations to solve problems. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How are patterns used in mathematics?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 451A-451B** ● Review Vocabulary: order of operations, parentheses **TE pg. 451B** **TE/SE pg. 451-453** ● Example 1

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• Talk Math ○ Students turn and talk: “Explain why Exercises 2 and 3 have different answers even though the numbers are the same.” • Independent Practice	• Assign On Level set: 9-23
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 454**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 455-456** • Quick Write, TE pg. 456 • SE pg. 455-456
Learning Opportunities/Strategies: **Lesson 8: Hands On: Equations with Two Operations** **Objective:** Students will explore equation with two operations.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: “How are patterns used in mathematics?” • Problem of the Day	**TE pg. 459A**
Build: • Build It	**TE/SE pg. 459** • Counters/Rubber Bands/Paper Clips • Paper Plates/Index Cards
Practice: • Try It • Talk About It • Practice It	**TE/SE pg. 460-461**
Apply: • Apply It • Write About It	**TE/SE pg. 462**
Wrap Up: • Assign homework	**TE pg. 463-464** • SE pg. 463-464
Learning Opportunities/Strategies: **Lesson 9: Equations with Multiple Operations** **Objective:** Students will use tables to recognize and write equations with two or more operations.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: “How are patterns used in mathematics?” • Developing Vocabulary	**TE pg. 465A-465B** • Review Vocabulary: equation, operation

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• Problem of the Day	
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 465B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how tables can help you solve a problem." • Independent Practice	**TE/SE pg. 465-467** • Example 1 • Assign On Level set: 5-13
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 468**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 469-470** • Definitions, TE pg. 470 • SE pg. 469-470
Learning Opportunities/Strategies: **Chapter 7 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Essential Question: • Remind students of the Essential Question: "How are patterns used in mathematics?"	
Review: • Vocabulary Check • Concept Check • Brain Builders	**TE/SE pg. 471** **TE/SE pg. 472** **TE/SE pg. 473**
Reflect: • Complete the graphic organizer.	**TE/SE pg. 474**
Assign homework:	**n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group • Utilize gradual release model • Modify problem set to "Beyond Level" • Focus on critical thinking questions at the end of the lesson. Technology	Small Group • Utilize gradual release model • Modify problem set to "On Level" • Utilize "Reteach" problem-set to model questions.	Small Group • Specific use of modalities - kinesthetic, visual, auditory, tactile • Utilize gradual release model	Small Group • Specific use of modalities - kinesthetic, visual, auditory, tactile • Utilize gradual release model

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● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station ● My Learning Station student-led activity

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Chapter Eight: **Fractions**

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.OA.4 -** Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
- **4.NF.1 -** Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
- **4.NF.2 -** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.
- **4.NF.3 -** Understand a fraction a/b with a > 1 as a sum of fractions 1/b.
- **4.NF.3b -**Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:

Students will…

- find factor pairs of whole numbers.
- model equivalent fractions.
- create equivalent fractions.
- benchmark fractions.

Essential/Guiding Question:

- How can different fractions name the same amount?

Content:

- Factors and Multiples
- Prime and Composite Numbers
- Hands On: Model Equivalent Fractions
- Equivalent Fractions
- Simplest Form
- Compare and Order Fractions
- Use Benchmark Fractions to Compare and Order
- Problem Solving Investigation: Use Logical Reasoning
- Mixed Numbers
- Mixed Numbers and Improper Fractions

Skills (Objectives):

- Find factors and multiples of whole numbers.
- Determine if a number is prime or composite.
- Explore equivalent fractions.
- Find equivalent fractions.
- Write a fraction in simplest form.
- Compare and order fractions.
- Use benchmark fractions to compare and order numbers.
- Use logical reasoning to solve problems.
- Represent mixed numbers by decomposing them into a sum of whole numbers and unit fractions.
- Write mixed numbers and improper fractions.

Interdisciplinary Connection(s):

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Fourth Grade Mathematics

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Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 8 - Assessment
- Chapter 8 Performance Task

Formative Assessments:

- Example/Non-Example
- Sequence
- Exit Slip
- Examples
- Quick Draw
- Summarize
- Application Cards
- Pair-Share
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:

Chapter Introduction

Resources:

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Objective: Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: ● Introduce the chapter by discussing the theme, "Now We're Cooking!" ● View online video to spark a discussion about how math is used in cooking. ● Introduce the Essential Question: "How can different fractions name the same amount?"	**TE pg.475** ● TE/SE pg. 475 ● Online Video ● TE/SE pg. 475
Am I Ready? ● Complete the "Am I Ready?" assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 477**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 478** ● Review Vocabulary: fourths, halves, is equal to (=), is greater than (>), is less than (<), thirds
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 479-482** ● New Vocabulary: benchmark fractions, composite number, denominator, equivalent fractions, factor pairs, greatest common factor, improper fraction, least common multiple
My Foldable ● This foldable provides practice with different ways to represent fractions.	**TE/SE pg. 483-484**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Use Benchmark Fractions to Compare and Order**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will find factors and multiples of whole numbers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can different fractions name the same amount?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 485A-485B** ● New Vocabulary: factor pairs
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 485B**
Practice: ● Math in My World ● Guided Practice	**TE/SE pg. 485-487** ● Example 1

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• Talk Math ○ Students turn and talk: “Would you rather divide or list the multiples for Exercises 3-5? Explain.” • Independent Practice	• Number Line/Hundred Chart • Assign On Level set: 9-20, 22-26
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 488**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 489-490** • Sequence, TE pg. 490 • SE pg. 489-490
Learning Opportunities/Strategies: **Lesson 2: Prime and Composite Numbers** **Objective:** Students will determine if a number is prime or composite.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: “How can different fractions name the same amount?” • Developing Vocabulary • Problem of the Day	**TE pg. 491A** • New Vocabulary: composite number, prime number
Build: • Investigate the Math: Explore, Model, Extend	**TE/SE pg. 491B** • Hundred Chart, Counters, Grid Paper
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Identify the smallest prime number. Explain how you know this is the smallest prime number.” • Independent Practice	**TE/SE pg. 491-493** • Assign On Level set: 7-17 (odd), 19-26
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 494**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 495-496** • Examples, TE pg. 496 • SE pg. 495-496
Learning Opportunities/Strategies: **Lesson 3: Hands On: Model Equivalent Fractions** **Objective:** Students will explore equivalent fractions.	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Review Homework: Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How can different fractions name the same amount?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Build It **Practice:** ● Try It ● Talk About It ● Practice It **Apply:** ● Apply It ● Write About It **Wrap Up:** ● Assign homework	**Student Homework Page** **TE pg. 499A** ● New Vocabulary: denominator, equivalent fraction, numerator **TE/SE pg. 499** ● Grid Paper, Crayons/Colored Pencils/Rulers ● Fraction Tiles **TE/SE pg. 500-501** ● Fraction Tiles ● Work Mat 8: Number Lines **TE/SE pg. 502** **TE pg. 503-504** ● SE pg. 503-504
Learning Opportunities/Strategies: **Lesson 4: Equivalent Fractions** **Objective:** Students will find equivalent fractions. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How can different fractions name the same amount?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Tell why 3/4, 6/8, and 9/12 are equivalent fractions. Give an example of another set of three equivalent fractions." ● Independent Practice **Apply:** ● Problem Solving	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 505A-505B** ● Review Vocabulary: denominator, equivalent fractions, numerator **TE pg. 505B** **TE/SE pg. 505-507** ● Example 1 ● Assign On Level set: 5-20 **TE/SE pg. 508**

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• Brain Builders	• Two Color Counters
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 509-510** • Examples/Non-Examples, TE pg. 510 • SE pg. 509-510
Learning Opportunities/Strategies: **Lesson 5: Simplest Form** **Objective:** Students will write a fraction in simplest form. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How can different fractions name the same amount?" • Developing Vocabulary • Problem of the Day	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 511A-511B** • New Vocabulary: greatest common factor, simplest form
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 511B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "How do you know that 4/5 is in simplest form?" • Independent Practice	**TE/SE pg. 511-513** • Example 1 • Fraction Tiles • Counters • Assign On Level set: 6-18 (even), 20-30
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 514**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 515-516** • Summarize, TE pg. 516 • SE pg. 515-516
Learning Opportunities/Strategies: **Lesson 6: Compare and Order Fractions** **Objective:** Students will compare and order fractions. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How can different fractions name the same amount?" • Developing Vocabulary • Problem of the Day	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 517A-517B** • New Vocabulary: least common multiple
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 517B**

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Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to compare 7/12 and 2/6." ● Independent Practice	**TE/SE pg. 517-519** ● Example 1 ● Fraction Tiles ● Fraction Circles ● Assign On Level set: 3-17 (odd), 18-22
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 520**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 521-522** ● Sequence, TE pg. 522 ● SE pg. 521-522
Learning Opportunities/Strategies: **Lesson 7: Use Benchmark Fractions to Compare and Order** **Objective:** Students will use benchmark fractions to compare and order numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can different fractions name the same amount?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 523A-523B** ● New Vocabulary: benchmark fractions
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 523B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain why Exercises 2 and 3 have different answers even though the numbers are the same." ● Independent Practice	**TE/SE pg. 523-525** ● Example 1 ● Work Mat 8: Number Lines ● Fraction Tiles ● Assign On Level set: 3-17 (odd), 18, 19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 526**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 527-528** ● Exit Slip, TE pg. 528 ● SE pg. 527-528
Learning Opportunities/Strategies: **Lesson 8: Problem-Solving Investigation: Use Logical Reasoning**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will use logical reasoning to solve problems.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can different fractions name the same amount?" ● Problem of the Day	**TE pg. 531A-531B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 531B ● TE/SE pg.531
Practice: ● Practice the Strategy	**TE/SE pg. 532**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 533-534** ● Assign On Level set: 1-5, 7
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 535-536** ● Summarize, TE pg. 536 ● SE pg. 535-536
Learning Opportunities/Strategies: **Lesson 9: Mixed Numbers**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will represent mixed numbers by decomposing them into a sum of whole numbers and unit fractions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can different fractions name the same amount?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 537A-537B** ● New Vocabulary: mixed number
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 537B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "How are fractions and mixed numbers alike? How are they different?" ● Independent Practice	**TE/SE pg. 537- 539** ● Example 1 ● Assign On Level set: 3-11 (even), 12-16
Apply: ● Problem Solving	**TE/SE pg. 540**

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• Brain Builders	
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 541-542** • Exit Slip, TE pg. 542 • SE pg. 541-542
Learning Opportunities/Strategies: **Lesson 10: Mixed Numbers and Improper Fractions** **Objective:** Students will write mixed numbers and improper fractions.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can different fractions name the same amount?" • Developing Vocabulary • Problem of the Day	**TE pg. 543A-543B** • New Vocabulary: improper fraction
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 543B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Why does the improper fraction and mixed number for Exercise 1 have the same denominator?" • Independent Practice	**TE/SE pg. 543-545** • Example 1 • Fraction Tiles • Fraction Circles • Assign On Level set: 4-16
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 546**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 547-548** • Pair Share, TE pg. 54 • SE pg. 547-548
Learning Opportunities/Strategies: **Chapter 8 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: • Review homework problems as needed.	**Student Homework Page**
Essential Question: • Remind students of the Essential Question: "How can different fractions name the same amount?"	
Review: • Vocabulary Check • Concept Check	**TE/SE pg. 549** **TE/SE pg. 550**

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• Brain Builders **Reflect:** • Complete the graphic organizer. **Assign homework:**	**TE/SE pg. 551** **TE/SE pg. 552** **n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group • Utilize gradual release model • Modify problem set to "Beyond Level" • Focus on critical thinking questions at the end of the lesson. Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	Small Group • Utilize gradual release model • Modify problem set to "On Level" • Utilize "Reteach" problem-set to model questions. • Focus on critical thinking questions at the end of the lesson. Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	Small Group • Specific use of modalities - kinesthetic, visual, auditory, tactile • Utilize gradual release model • Modify problem set to "Approaching Level" • Utilize "Reteach" problem-set to model questions. • Focus on critical thinking questions at the end of the lesson. • Pair with on grade level or higher-achieving students to problem solve Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	Small Group • Specific use of modalities - kinesthetic, visual, auditory, tactile • Utilize gradual release model • Modify problem set to "Approaching Level" • Utilize "Reteach" problem-set to model questions. • Focus on critical thinking questions at the end of the lesson. • Pair with on grade level or higher-achieving students to problem solve Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner

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			Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station ● My Learning Station student-led activity

Chapter Nine: Operations with Fractions

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.NF.3a -** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- **4.NF.3b -**Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.
- **4.NF.3c -** Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
- **4.NF.3d -** Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
- **4.NF.4a -** . Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).
- **4.NF.4b -** Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:	Essential/Guiding Question:
Students will… ● use fraction tiles to model the sum of fractions. ● add and subtract like fractions. ● add and subtract mixed numbers. ● use an equation to write a fraction as a multiple of a unit fraction. ● multiply a fraction by a whole number.	● How can I use operations to model real-world fractions?
Content:	**Skills (Objectives):**
● Hands On: Use Models to Add Like Fractions ● Add Like Fractions ● Hands On: Use Models to Subtract Like Fractions	● Use models to add like fractions. ● Add like fractions. ● Use models to subtract like fractions.

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• Subtract Like Fractions • Problem-Solving Investigation: Work Backward • Add Mixed Numbers • Subtract Mixed Numbers • Hands On: Model Fractions and Multiplication	• Subtract like fractions. • Work backward to solve problems. • Add mixed numbers. • Subtract mixed numbers. • Use models to multiply fractions. • Multiply fractions by whole numbers.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment: • Am I Ready?	**Summative Assessment:** • My Review • Reflect • Chapter 9 - Assessment • Chapter 9 Performance Task
Formative Assessments: • Application Cards • Sequence • Use Structure • Quick Draw • Exit Slip	**Benchmark Assessment:** • Benchmark Assessment

• Questioning • Example • One-Minute Essay • Paraphrase • Talk Math • Independent Practice • Check My Progress	

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: • Introduce the chapter by discussing the theme, "Let's Play Games!" • View online video to spark a discussion about how math is used in games. • Introduce the Essential Question: "How can I use operations to model real-world fractions?"	**TE pg. 553** • TE/SE pg. 553 • Online Video • TE/SE pg. 553
Am I Ready? • Complete the "Am I Ready?" assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 555**
My Math Words • Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 556** • Review Vocabulary: denominator, mixed number, numerator, simplest form
My Vocabulary Cards • Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 557-558** • New Vocabulary: like fractions
My Foldable • This foldable provides practice with adding, subtracting, and multiplying fractions.	**TE/SE pg. 559-560**
Wrap Up • Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** • Must print letter
Learning Opportunities/Strategies: **Lesson 1: Hands On: Use Models to Add Like Fractions** **Objective:** Students will use models to add like fractions.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I use operations to model real-world fractions?"	**TE pg. 561A**

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• Developing Vocabulary • Problem of the Day **Build:** • Build It **Practice:** • Try It • Talk About It • Practice It **Apply:** • Apply It • Write About It **Wrap Up:** • Assign homework	• New Vocabulary: like fractions **TE/SE pg. 561** • Fraction Models/Tiles **TE/SE pg. 562-563** • Fraction Models/Tiles **TE/SE pg. 564** **TE pg. 565-566** • SE pg. 565-566
Learning Opportunities/Strategies: **Lesson 2: Add Like Fractions** **Objective:** Students will add like fractions **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How can I use operations to model real-world fractions?" • Developing Vocabulary • Problem of the Day **Build:** • Investigate the Math: Explore, Model, Extend **Practice:** • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Describe two ways to decompose 4/5 into a sum." • Independent Practice **Apply:** • Problem Solving • Brain Builders **Wrap Up:** • Complete formative assessment • Assign homework	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 567A** • Review Vocabulary: denominator, numerator, simplify, greatest common factor (GCF), like fractions **TE/SE pg. 567B** • Fraction Circles/Tiles **TE/SE pg. 567-569** • Example 1 • Fraction Circles • Fraction Tiles • Assign On Level set: 6-13, 15-19 **TE/SE pg. 570** **TE pg. 571-572** • Sequence, TE pg. 572 • SE pg. 571-572
Learning Opportunities/Strategies: **Lesson 3: Hands On: Use Models to Subtract Like Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will use models to subtract like fractions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I use operations to model real-world fractions?" ● Problem of the Day	**TE pg. 573A**
Build: ● Build It	**TE/SE pg. 573** ● Fraction Tiles
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 574-575** ● Fraction Tiles
Apply: ● Apply It ● Write About It	**TE/SE pg. 576**
Wrap Up: ● Assign homework	**TE pg. 577-578** ● SE pg. 577-578
Learning Opportunities/Strategies: **Lesson 4: Subtract Like Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will subtract like fractions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I use operations to model real-world fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 579A** ● Review Vocabulary: like fractions, simplest form
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 579B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to find 7/8 - 1/8." ● Independent Practice	**TE/SE pg. 579-581** ● Example 1 ● Fraction Tiles ● Assign On Level set: 7-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 582**
Wrap Up: ● Complete formative assessment	**TE pg. 583-584** ● Exit Slip, TE pg. 584

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● Assign homework	● SE pg. 583-584
Learning Opportunities/Strategies: **Lesson 5: Problem-Solving Investigation: Work Backward** **Objective:** Students will work backward to solve problems.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I use operations to model real-world fractions?" ● Problem of the Day	**TE pg. 587A-587B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 587B ● TE/SE pg.587
Practice: ● Practice the Strategy	**TE/SE pg. 588**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 589-590** ● Assign On Level set: 2-7
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 591-592** ● Exit Slip, TE pg. 592 ● SE pg. 591-592
Learning Opportunities/Strategies: **Lesson 6: Add Mixed Numbers** **Objective:** Students will add mixed numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I use operations to model real-world fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 593A-593B** ● Review Vocabulary: Associative Property, decompose, equivalent fractions, mixed number
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 593B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how adding mixed numbers is different than adding whole numbers."	**TE/SE pg. 593-595** ● Example 1 ● Fraction Tiles ● Fraction Circles

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• Independent Practice	• Assign On Level set: 6-10, 12, 13, 15-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 596**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 597-598** • Example, TE pg. 597 • SE pg. 597-598
Learning Opportunities/Strategies: **Lesson 7: Subtract Mixed Numbers** **Objective:** Students will subtract mixed numbers. **Review Homework:** Review homework problems as needed.	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I use operations to model real-world fractions?" • Developing Vocabulary • Problem of the Day	**TE pg. 599A-599B** • Review Vocabulary: equivalent fractions
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 599B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Refer to the addition check in Example 2. What property allows you to group the whole numbers together and the like fractions together when adding" • Independent Practice	**TE/SE pg. 599-601** • Example 1 • Fraction Tiles/Circles • Assign On Level set: 6-16
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 602**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 603-604** • Exit Slip, TE pg. 604 • SE pg. 603-604
Learning Opportunities/Strategies: **Lesson 8: Hands On: Model Fractions and Multiplication** **Objective:** Students will use models to multiply fractions. . **Review Homework:** Review homework problems as needed.	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page**
Launch: • Remind students of the Essential Question: "How can I use operations to model real-world fractions?" • Problem of the Day	**TE pg. 607A**

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Build: ● Build It **Practice:** ● Try It ● Talk About It ● Practice It **Apply:** ● Apply It ● Write About It **Wrap Up:** ● Assign homework	**TE/SE pg. 607** ● Fraction Tiles/Circles **TE/SE pg. 608-609** ● Fraction Tiles/Circles **TE/SE pg. 610** **TE pg. 611-612** ● SE pg. 611-612
Learning Opportunities/Strategies: **Lesson 9: Multiply Fractions by Whole Numbers** **Objective:** Students will multiply fractions by whole numbers. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How can I use operations to model real-world fractions?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Does 3 x 7/8 = 3 7/8? Explain." ● Independent Practice **Apply:** ● Problem Solving ● Brain Builders **Wrap Up:** ● Complete formative assessment ● Assign homework	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 613A-613B** ● Review Vocabulary: product **TE pg. 613B** **TE/SE pg. 613- 614** ● Example 1 ● Fraction Tiles ● Assign On Level set: 5-14 **TE/SE pg. 616** **TE pg. 617-618** ● Paraphrase, TE pg. 618 ● SE pg. 617-618
Learning Opportunities/Strategies: **Chapter 9 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**

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Review Homework: ● Review homework problems as needed. **Essential Question:** ● Remind students of the Essential Question: "How can I use operations to model real-world fractions?" **Review:** ● Vocabulary Check ● Concept Check ● Brain Builders **Reflect:** ● Complete the graphic organizer. **Assign homework:**	**Student Homework Page** **TE/SE pg. 619** **TE/SE pg. 620** **TE/SE pg. 621** **TE/SE pg. 622** **n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to

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	• Utilize the McGraw Hill English Language Learner Guide to provide	demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide foundational support • Specific use of modalities - kinesthetic, visual, auditory, tactile • The multilingual eGlossary can support vocabulary Learning Station • My Learning Station student-led activity

Chapter Ten: Fractions and Decimals

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.NF.5 -** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.4 For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.
- **4.NF.6 -** Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.
- **4.NF.7 -** Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:

Students will…

- use place value to write decimals.
- use models to represent decimals.
- compare decimals.
- use decimal notation to represent fractions.
- add two fractions with denominators of 10 and 100.

Essential/Guiding Question:

- How are fractions and decimals related?

Fourth Grade Mathematics

Content:	**Skills (Objectives):**
● Hands On: Place Value Through Tenths and Hundredths ● Tenths ● Hundredths ● Hands On Model Decimals and Fractions ● Decimals and Fractions ● Use Place Value and Models to Add ● Compare and Order Decimals ● Problem-Solving Investigation: Extra or Missing Information	● Explore using place-value charts and grids to model decimals. ● Model and describe tenths as part of the base-ten system. ● Model and describe hundredths as part of the base-ten system. ● Explore using grids and number lines to model the relationship between decimals and fractions. ● Identify, read, and write tenths and hundredths as decimals and fractions. ● Use place value and equivalent fractions to add two fractions with respective denominators 10 and 100. ● Compare and order decimals to hundredths by reasoning about their size. ● Find extra or missing information when solving problems.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Fourth Grade Mathematics

Stage 2: Assessment Evidence

Diagnostic Assessment:
- Am I Ready?

Summative Assessment:
- My Review
- Reflect
- Chapter 10 - Assessment
- Chapter 10 Performance Task

Formative Assessments:
- Application Cards
- Questioning
- One-Minute Essay
- Quick Draw
- Exit Slip
- Think-Pair-Share
- Sequence
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:
- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: ● Introduce the chapter by discussing the theme, “Away We Go!” ● View online video to spark a discussion about how math is used in different forms of transportation. ● Introduce the Essential Question: “How are fractions and decimals related?”	**TE pg. 623** ● TE/SE pg. 623 ● Online Video ● TE/SE pg. 623
Am I Ready? ● Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 625**
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 626** ● Review Vocabulary: equivalent, fraction, place value
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 627-628** ● New Vocabulary: decimal, hundredth, tenth
My Foldable ● This foldable provides practice with modeling tenths.	**TE/SE pg. 629-630**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter

Fourth Grade Mathematics

Learning Opportunities/Strategies:	Resources:
Lesson 1: Hands On: Place Value Through Tenths and Hundredths **Objective:** Students will explore using place-value charts and grids to model decimals.	**Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 631A** ● New Vocabulary: decimal, hundredth, tenth
Build: ● Build It	**TE/SE pg. 631** ● Work Mat 5: Tenths and Hundredths Models ● Work Mat 6: Place-Value Chart, Play Money
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 632-633** ● Work Mat 5: Tenths and Hundredths Models ● Work Mat 6: Place-Value Chart, Play Money
Apply: ● Apply It ● Write About It	**TE/SE pg. 634**
Wrap Up: ● Assign homework	**TE pg. 635-636** ● SE pg. 635-636
Learning Opportunities/Strategies:	**Resources:**
Lesson 2: Tenths **Objective:** Students will model and describe tenths as part of the base-ten system.	**Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 637A** ● Review Vocabulary: tenths
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 637B** ● Tenths Grid
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain why dimes could be used to model tenths." ● Independent Practice	**TE/SE pg. 637-639** ● Example 1 ● Work Mat 5: Tenths and Hundredths Models ● Work Mat 6: Place-Value Chart ● Work Mat 7: Number Lines ● Assign On Level set: 5-17

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 640**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 641-642** ● Questioning, TE pg. 642 ● SE pg. 641-642
Learning Opportunities/Strategies: **Lesson 3: Hundredths** **Objective:** Students will model and describe hundredths as part of the base-ten.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 643A** ● Review Vocabulary: hundredth
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 643B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain why pennies can be used to model hundredths." ● Independent Practice	**TE/SE pg. 643-645** ● Example 1 ● Work Mat 5: Tenths and Hundredths Models ● Work Mat 6: Place-Value Chart ● Assign On Level set: 6-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 646**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 647-648** ● Quick Draw, TE pg. 648 ● SE pg. 647-648
Learning Opportunities/Strategies: **Lesson 4: Hands On: Model Decimals and Fractions** **Objective:** Students will explore using grids and number lines to model the relationship between decimals and fractions.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Problem of the Day	**TE pg. 651A**

Fourth Grade Mathematics

Build: ● Draw It	**TE/SE pg. 651** ● Work Mat 5: Tenths and Hundredths Models ● Work Mat 6: Place-Value Chart ● Work Mat 8: Number Lines ● Crayons/Colored Pencils
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 652-653**
Apply: ● Apply It ● Write About It	**TE/SE pg. 654**
Wrap Up: ● Assign homework	**TE pg. 655-656** ● SE pg. 655-656
Learning Opportunities/Strategies: **Lesson 5: Decimals and Fractions** **Objective:** Students will identify, read, and write tenths and hundredths as decimals and fractions.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 657A** ● Review Vocabulary: decimal, fraction
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 657B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Is one tenth greater than or less than one hundredth? Explain." ● Independent Practice	**TE/SE pg. 657-659** ● Example 1 ● Work Mat 5: Tenths and Hundredths Models ● Assign On Level set: 3-12 (even), 13-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 660**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 661-662** ● Think-Pair-Share, TE pg. 662 ● SE pg. 661-662
Learning Opportunities/Strategies: **Lesson 6: Use Place Value and Models to Add**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will use place value and equivalent fractions to add two fractions with respective denominators 10 and 100.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 663A-664B** ● Review Vocabulary: like fractions
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 663B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "In Example 2, why was 4/10 written as 40/100?" ● Independent Practice	**TE/SE pg. 663-665** ● Example 1 ● Work Mat 5: Tenths or Hundredths Models ● crayons/markers ● Assign On Level set: 5-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 666**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 667-668** ● Think-Pair-Share, TE pg. 668 ● SE pg. 667-668
Learning Opportunities/Strategies: **Lesson 7: Compare and Order Decimals**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will compare and order decimals to hundredths by reasoning about their size.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 669A-669B** ● Review Vocabulary: place value
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 669B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to compare 0.4 and 0.40." ● Independent Practice	**TE/SE pg. 669-672** ● Example 1 ● Work Mat 5: Tenths and Hundredths Models ● Work Mat 6: Place-Value Chart ● Work Mat 8: Number Lines ● crayons or markers ● Assign On Level set: 10-15, 18-28

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 672**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 673-674** ● Sequence, TE pg. 674 ● SE pg. 673-674
Learning Opportunities/Strategies: **Lesson 8: Problem-Solving Investigation: Extra or Missing Numbers** **Objective:** Students will find extra or missing information when solving problems.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are fractions and decimals related?" ● Problem of the Day	**TE pg. 675A-675B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 675B ● TE/SE pg. 675
Practice: ● Practice the Strategy	**TE/SE pg. 676**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 677-678** ● Assign On Level set: 2-7
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 679-680** ● Think-Pair-Share, TE pg. 680 ● SE pg. 679-680
Learning Opportunities/Strategies: **Chapter 10 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Essential Question: ● Remind students of the Essential Question: "How are fractions and decimals related?"	
Review: ● Vocabulary Check ● Concept Check ● Brain Builders	**TE/SE pg. 681** **TE/SE pg. 682** **TE/SE pg. 683**

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Reflect: ● Complete the graphic organizer. **Assign homework:**	**TE/SE pg. 684** **n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support

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			• Specific use of modalities - kinesthetic, visual, auditory, tactile • The multilingual eGlossary can support vocabulary Learning Station • My Learning Station student-led activity

Chapter Eleven: **Customary Measurement**

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.M.1 -** Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), …
- **4.M.2 -** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
- **4.DL.1** Create data-based questions, generate ideas based on the questions, and then refine the questions.
- **4.DL.2** Develop strategies to collect various types of data and organize data digitally.
- **4.DL.3** - Understand that subsets of data can be selected and analyzed for a particular purpose.
- **4.DL.4** - Analyze visualizations of a single data set, share explanations, and draw conclusions that the data supports.
- **4.DL.5 -** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:	**Essential/Guiding Question:**
Students will… • convert customary units of length. • convert customary units of capacity. • convert customary units of weight. • convert units of time. • use a line plot to represent measurement data involving fractions of units.	• Why do we convert measurements?
Content: • Customary Units of Length • Convert Customary Units of Length • Customary Units of Capacity	**Skills (Objectives):** • Estimate and measure length using customary units. • Convert customary units of length. • Estimate and measure customary capacities.

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• Convert Customary Units of Capacity • Customary Units of Weights • Convert Customary Units of Weights • Convert Units of Time • Display Measurement Data in a Line Plot • Solve Measurement Problems • Problem-Solving Investigation: Guess, Check, and Revise	• Convert customary units of capacity. • Estimate and measure customary units of weight. • Convert customary units of weight. • Convert units of time. • Display measurement data in a line plot. • Solve problems involving measurement. • Solve problems using the guess, check, and revise strategy.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
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- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment: • Am I Ready?	**Summative Assessment:** • My Review • Reflect • Chapter 11 - Assessment • Chapter 11 Performance Task
Formative Assessments: • Think-Pair-Share • Quick Write • Response Cards	**Benchmark Assessment:** • Benchmark Assessment

• Application Cards • Word Sort • Summarize • Sequence • Quick Draw • Exit Slip • One-Minute Essay • Talk Math • Independent Practice • Check My Progress	

Stage 3: Learning Plan

Learning Opportunities/Strategies:	Resources:
Chapter Introduction **Objective:** Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: • Introduce the chapter by discussing the theme, "Let's Discover Nature!" • View online video to spark a discussion about how math is used in learning more about nature. • Introduce the Essential Question: "Why do we convert measurements?"	**TE pg. 685** • TE/SE pg. 685 • Online Video • TE/SE pg. 685
Am I Ready? • Complete the "Am I Ready?" assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 687**
My Math Words • Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 688** • Review Vocabulary: estimate, time, length, weight
My Vocabulary Cards • Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 689-694** • New Vocabulary: capacity, convert, cup, customary system, fluid ounce, foot, gallon, line plot, ounce, pint, pound, mile, quart, second, ton, weight, yard
My Foldable • This foldable provides practice with conversion of measurements within the customary system of measurement.	**TE/SE pg. 695-696**
Wrap Up • Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** • Must print letter
Learning Opportunities/Strategies: **Lesson 1: Customary Units of Length** **Objective:** Students will estimate and measure length using customary units.	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why do we convert measurements?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 697A** ● New Vocabulary: yard (yd), customary system, foot (ft)
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 697B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Why do you think there is more than one unit of length for measure?" ● Independent Practice	**TE/SE pg. 697-699** ● Example 1 ● Rulers ● Assign On Level set: 6-14
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 700**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 701-702** ● Quick Write, TE pg. 702 ● SE pg. 701-702
Learning Opportunities/Strategies: **Lesson 2: Convert Customary Units of Length** **Objective:** Students will convert customary units of length.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why do we convert measurements?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 703A** ● Review Vocabulary: convert, mile (mi)
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 703B** ● Tenths Grid
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "When converting from larger units to smaller units, do you need to multiply or divide?" ● Independent Practice	**TE/SE pg. 703-705** ● Example 1 ● Assign On Level set: 5-19

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 706**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 707-708** ● Application Cards, TE pg. 708 ● SE pg. 707-708
Learning Opportunities/Strategies: **Lesson 3: Customary Units of Capacity** **Objective:** Students will estimate and measure customary capacities.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why do we convert measurements?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 709A** ● Review Vocabulary: capacity, gallon (gal), pint (pt), quart (qt), cup (c), fluid ounce (fl oz)
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 709B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Is it possible for both of us to have a capacity of 1 pint? Explain." ● Independent Practice	**TE/SE pg. 709-711** ● Example 1 ● Assign On Level set: 7-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 712**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 713-714** ● Summarize, TE pg. 714 ● SE pg. 713-714
Learning Opportunities/Strategies: **Lesson 4: Convert Customary Units of Capacity** **Objective:** Students will convert customary units of capacity.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why do we convert measurements?" ● Developing Vocabulary	**TE pg. 715A** ● Review Vocabulary: capacity, convert, is equal to (=), is greater than (>), is less than (<)

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• Problem of the Day	
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 715B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how to convert 6 pints to cups." • Independent Practice	**TE/SE pg. 715-717** • Example 1 • Assign On Level set: 6, 7, 11-27
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 718**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 719-720** • Word Sort, TE pg. 720 • SE pg. 719-720
Learning Opportunities/Strategies: **Lesson 5: Customary Units of Weight** **Objective:** Students will estimate and measure customary units of weight.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "Why do we convert measurements?" • Developing Vocabulary • Problem of the Day	**TE pg. 723A** • New Vocabulary: ounce (oz), ton (T), pound (lb), weight
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 723B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Does an object that is small always weigh less than an object that is large? Explain." • Independent Practice	**TE/SE pg. 723-725** • Example 1 • Assign On Level set: 6-16
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 726**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 727-728** • Response Cards, TE pg. 728 • SE pg. 727-728

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Learning Opportunities/Strategies:	Resources:
Lesson 6: Convert Customary Units of Weight	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will convert customary units of weight.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why do we convert measurements?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 729A** ● Review Vocabulary: capacity, convert, length, weight
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 729B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain why you multiply to convert a larger unit of measure to a smaller unit of measure." ● Independent Practice	**TE/SE pg. 729-731** ● Example 1 ● Assign On Level set: 4, 6-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 732**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 733-734** ● Summarize, TE pg. 734 ● SE pg. 733-734
Learning Opportunities/Strategies:	**Resources:**
Lesson 7: Convert Units of Time	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will convert units of time.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why do we convert measurements?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 735A** ● New Vocabulary: seconds
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 735B**
Practice: ● Math in My World ● Guided Practice ○ **Climate Change Opportunity**	**TE/SE pg. 735-737** ● Example 1 **Climate Change Example:** ● Climate Change Word Problem

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• Talk Math ○ "What operation would you use to find the number of minutes in 2 hours? Explain." • Independent Practice	• Assign On Level set: 5, 7, 8-21
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 738**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 739-740** • Exit Slip, TE pg. 740 • SE pg. 739-740
Learning Opportunities/Strategies: **Lesson 8: Display Measurement Data in a Line Plot** **Objective:** Students will display measurement data in a line plot.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "Why do we convert measurements?" • Developing Vocabulary • Problem of the Day	**TE pg. 743A** • Review Vocabulary: place value
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 743B**

Practice:
• Math in My World
• Guided Practice
  ○ **Climate Change Opportunity**
• Talk Math
  ○ Students turn and talk: "Describe a real-world situation in which the data in a tally chart and line plot could be helpful."
• Independent Practice
	TE/SE pg. 743-735
	• Example 1
	
	Climate Change Example:
	• Climate Change Word Problem
	
	• Assign On Level set: 3, 5-11

Apply: • Problem Solving • Brain Builders	**TE/SE pg. 746**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 747-748** • Exit Slip, TE pg. 748 • SE pg. 747-748
Learning Opportunities/Strategies: **My Chapter Project: Collecting and Organizing Data** **Objective:** Students will create data based questions to ask classmates, collect data, organize data, and create interpretive questions based on the data.	**Resources:** Tally chart: Chromebook using Google program to organize data collected digitally **Example Questions:** What are your classmates' birthday months? What is your favorite ice cream flavor?

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Review Homework: Review homework problems as needed. **Launch**: ● Review line plots. ● Show other ways to organize data: Bar graph, Column Chart, Line Graph, and Pie Graph **Build:** ● Students will create data driven questions to ask classmates. ● Students will create a tally chart based on classmate responses to questions. **Practice:** ● Students will take tally chart data and display it digitally in Google program (Docs or slides) based on results. **Apply:** ● Students will create a data based question based on the results of their findings. **Wrap Up:** ● Students present data and questions to class to solve.	What is your favorite sport?
Learning Opportunities/Strategies: **Lesson 9: Solve Measurement Problems** **Objective:** Students will solve problems involving measurement. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "Why do we convert measurements?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Which operations did you use to solve Exercise 2? Explain." ● Independent Practice **Apply:** ● Problem Solving ● Brain Builders	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 749A** ● Review Vocabulary: fraction **TE/SE pg. 749B** **TE/SE pg. 749-751** ● Example 1 ● Assign On Level set: 3, 4, 6, 8-10 **TE pg. 752**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 753-754** ● Quick Write, TE pg. 754 ● SE pg. 753-754
Learning Opportunities/Strategies: **Lesson 10: Problem-Solving Investigation: Guess, Check, and Revise** **Objective:** Students will solve problems using the guess, check, and revise strategy.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why do we convert measurements?" ● Problem of the Day	**TE pg. 755A-755B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 755B ● TE/SE pg. 755
Practice: ● Practice the Strategy	**TE/SE pg. 756**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 757-758** ● Assign On Level set: 1-4, 6, 7
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 759-760** ● Think-Pair-Share, TE pg. 760 ● SE pg. 759-760
Learning Opportunities/Strategies: **Chapter 11 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Essential Question: ● Remind students of the Essential Question: "Why do we convert measurements?"	
Review: ● Vocabulary Check ● Concept Check ● Brain Builders	**TE/SE pg. 761** **TE/SE pg. 762** **TE/SE pg. 763**
Reflect: ● Complete the graphic organizer.	**TE/SE pg. 764**
Assign homework:	**n/a**

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Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to “Beyond Level” ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Utilize gradual release model ● Modify problem set to “On Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile

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			• The multilingual eGlossary can support vocabulary Learning Station • My Learning Station student-led activity

Chapter Twelve: Metric Measurement

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.M.1 -** Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), …
- **4.M.2 -** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:

Students will…

- estimate measures of length in the metric system.
- estimate metric units of capacity.
- estimate metric units of mass.
- convert metric units of measurement.
- solve word problems involving metric measurements.

Essential/Guiding Question:

- How can conversion of measurements help me solve real-world problems?

Content:

- Metric Units of Length
- Metric Units of Capacity
- Metric Units of Mass
- Problem Solving Investigation: Make an Organized List
- Convert Metric Units
- Solve Measurement Problems

Skills (Objectives):

- Estimate and measure lengths within the metric system.
- Estimate and measure metric capacities.
- Estimate and measure mass and learn the difference between weight and mass.
- Make an organized list to solve problems.
- Convert metric units.
- Solve problems involving measurements.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

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- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 12 - Assessment
- Chapter 12 Performance Task

Formative Assessments:

- Quick Write
- Application Cards
- Sequence
- Quick Draw
- Questioning
- One-Minute Essay
- Response Cards
- Error Analysis
- Think-Pair-Share
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:

Chapter Introduction

Resources:

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Objective: Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.	
Chapter Introduction: ● Introduce the chapter by discussing the theme, "Around My House". ● View online video to spark a discussion about how math is used around the house. ● Introduce the Essential Question: "How can conversion of measurements help me solve real-world problems?"	**TE pg. 765** ● TE/SE pg. 765 ● Online Video ● TE/SE pg. 765
Am I Ready? ● Complete the "Am I Ready?" assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 767**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 768** ● Review Vocabulary: capacity, length
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 769-772** ● New Vocabulary: centimeter (cm), gram (g), kilogram (kg), kilometer (km), liter (L), mass, meter (m), metric system, milliliter (mL), millimeter (mm)
My Foldable ● This foldable provides practice with the metric system of measurement.	**TE/SE pg. 773-774**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Metric Units of Length**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will estimate and measure lengths within the metric system.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can conversion of measurements help me solve real-world problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 775A** ● New Vocabulary: centimeter (cm), kilometer (km), meter (m), metric system, millimeter (mm)
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 775B**

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Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Describe a situation when it would be appropriate to measure an object using millimeters.” ● Independent Practice	**TE/SE pg. 775-777** ● Example 1 ● Centimeter Rulers ● Assign On Level set: 5-13
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 778**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 779-780** ● Quick Write, TE pg. 780 ● SE pg. 779-780
Learning Opportunities/Strategies: **Lesson 2: Metric Units of Capacity** **Objective:** Students will estimate and measure metric capacities.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “How can conversion of measurements help me solve real-world problems?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 781A** ● New Vocabulary: liter (L), milliliter (mL)
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 781B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Describe the unit of capacity you would use to measure the capacity of a bottle of medicine.” ● Independent Practice	**TE/SE pg. 781-783** ● Example 1 ● Assign On Level set: 6-15
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 784**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 707-708** ● Sequence, TE pg. 786 ● SE pg. 785-786
Learning Opportunities/Strategies: **Lesson 3: Metric Units of Mass**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will estimate and measure mass and learn the difference between weight and mass.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can conversion of measurements help me solve real-world problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 787A** ● New Vocabulary: gram (g), kilogram (kg), mass
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 787B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain the difference between weight and mass." ● Independent Practice	**TE/SE pg. 787-789** ● Example 1 ● Assign On Level set: 5-14
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 790**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 791-792** ● Questioning, TE pg. 792 ● SE pg. 791-792
Learning Opportunities/Strategies: **Lesson 4: Problem-Solving Investigation: Make an Organized List**	**Resources:**
Objective: Students will make an organized list to solve problems.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can conversion of measurements help me solve real-world problems?" ● Problem of the Day	**TE pg. 755A**
Build: ● Prepare ● Learn the Strategy	● TE pg. 795B ● TE/SE pg. 795
Practice: ● Practice the Strategy	**TE/SE pg. 796**
Apply: ● Apply the Strategy	**TE/SE pg. 797-798** ● Assign On Level set: 3-9

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• Brain Builders • Review the Strategies	
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 799-800** • Think-Pair-Share, TE pg. 800 • SE pg. 799-800
Learning Opportunities/Strategies: **Lesson 5: Convert Metric Units** **Objective:** Students will convert metric units.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can conversion of measurements help me solve real-world problems?" • Developing Vocabulary • Problem of the Day	**TE pg. 801A** • Review Vocabulary: convert
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 801B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain why multiplication is used to convert from a larger unit to a smaller unit." • Independent Practice	**TE/SE pg. 801-803** • Example 1 • Assign On Level set: 6, 11-21 (odd), 22-27
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 804**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 805-806** • Error Analysis, TE pg. 806 • SE pg. 805-806
Learning Opportunities/Strategies: **Lesson 6: Solve Measurement Problems** **Objective:** Students will solve problems involving measurement.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: "How can conversion of measurements help me solve real-world problems?" • Developing Vocabulary • Problem of the Day	**TE pg. 807A** • Review Vocabulary: decimal

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Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 807B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how you can check your answer for Exercise 1." ● Independent Practice	**TE/SE pg. 807-809** ● Example 1 ● Assign On Level set: 4, 6, 7-11
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 810**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 811-812** ● Summarize, TE pg. 812 ● SE pg. 811-812
Learning Opportunities/Strategies: **Chapter 12 Review and Reflect**	**Resources:**
Objective: Assess students' understanding of the vocabulary and key concepts in this chapter.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Essential Question: ● Remind students of the Essential Question: "How can conversion of measurements help me solve real-world problems?"	
Review: ● Vocabulary Check ● Concept Check ● Brain Builders	**TE/SE pg. 813** **TE/SE pg. 814** **TE/SE pg. 815**
Reflect: ● Complete the graphic organizer.	**TE/SE pg. 816**
Assign homework:	**n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions.	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model

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● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station ● My Learning Station student-led activity

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Chapter Thirteen: Perimeter and Area

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.M.3 -** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:

Students will…

- find the perimeter of a rectangle.
- find the perimeter of a rectangle by using a formula.
- find the area of a rectangle.
- find the area of a square.
- relate perimeter and area of rectangles.

Essential/Guiding Question:

- Why is it important to measure perimeter and area?

Content:

- Measure Perimeter
- Problem-Solving Investigation: Solve a Simpler Problem
- Hands On: Model Area
- Measure Area
- Relate Area and Perimeter

Skills (Objectives):

- Find the perimeter of a figure.
- Solve a simpler problem to solve problems.
- Explore the area of a figure.
- Find the area of rectangles and squares.
- Relate area to perimeter.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).

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- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 13 - Assessment
- Chapter 13 Performance Task

Formative Assessments:

- Exit Slip
- Response Cards
- One-Minute Essay
- Summary
- Quick Draw
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:

Chapter Introduction

Objective: Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.

Chapter Introduction:

- Introduce the chapter by discussing the theme, “Let’s Cheer Our Team!”
- View online video to spark a discussion about how math is used in sports and games.
- Introduce the Essential Question: “Why is it important to measure perimeter and area?”

Am I Ready?

- Complete the “Am I Ready?” assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.

Resources:

TE pg. 817

- TE/SE pg. 817
- Online Video
- TE/SE pg. 817

TE/SE pg. 819

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My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 820** ● Review Vocabulary: length, product
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 821-822** ● New Vocabulary: area, perimeter, square unit, unit square
My Foldable ● This foldable provides practice with the metric system of measurement.	**TE/SE pg. 823-824**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Measure Perimeter**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will find the perimeter of a figure.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “Why is it important to measure perimeter and area?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 825A** ● New Vocabulary: perimeter
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 825B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Describe two ways to find the perimeter of a square.” ● Independent Practice	**TE/SE pg. 825-827** ● Example 1 ● Assign On Level set: 5-15
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 828**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 829-830** ● Response Cards, TE pg. 830 ● SE pg. 829-830
Learning Opportunities/Strategies: **Lesson 2: Problem Solving Investigation Strategy: Solve a Simpler Problem**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will solve a simpler problem to solve problems.	

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Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why is it important to measure perimeter and area?" ● Problem of the Day	**TE pg. 831A**
Build: ● Prepare ● Learn the Strategy	● TE pg. 831B ● TE/SE pg. 831
Practice: ● Practice the Strategy	**TE/SE pg. 832**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 833-834** ● Assign On Level set: 3-9
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 835-836** ● Exit Slip, TE pg. 836 ● SE pg. 835-836
Learning Opportunities/Strategies: **Lesson 3: Hands On: Model Area** **Objective:** Students will explore the area of a figure.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why is it important to measure perimeter and area?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 839A** ● New Vocabulary: area, square unit, unit square
Build: ● Build It	**TE/SE pg. 839** ● Grid Paper
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 840-841**
Apply: ● Apply It ● Write About It	**TE/SE pg. 842**
Wrap Up: ● Assign homework	**TE pg. 843-844** ● SE pg. 843-844
Learning Opportunities/Strategies: **Lesson 4: Measure Area**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will find the area of rectangles and squares.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why is it important to measure perimeter and area?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 845A** ● Review Vocabulary: area
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 845B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Describe two ways to find the area of a square." ● Independent Practice	**TE/SE pg. 845-847** ● Example 1 ● Assign On Level set: 5-15
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 848**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 849-850** ● Response Cards, TE pg. 850 ● SE pg. 849-850
Learning Opportunities/Strategies: **Lesson 5: Relate Area and Perimeter**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will relate area to perimeter.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "Why is it important to measure perimeter and area?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 851A** ● Review Vocabulary: area, perimeter
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 851B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Which rectangle in Example 2 has the least area?" ● Independent Practice	**TE/SE pg. 851-853** ● Example 1 ● Assign On Level set: 4-12

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 854**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 855-856** ● Exit Slip, TE pg. 856 ● SE pg. 855-856
Learning Opportunities/Strategies: **Chapter 13 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Essential Question: ● Remind students of the Essential Question: "Why is it important to measure perimeter and area?"	
Review: ● Vocabulary Check ● Concept Check ● Brain Builders	**TE/SE pg. 857** **TE/SE pg. 858** **TE/SE pg. 859**
Reflect: ● Complete the graphic organizer.	**TE/SE pg. 860**
Assign homework:	**n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model ● Modify problem set to "Approaching Level" ● Utilize "Reteach" problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve

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• Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	• Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide	Technology • Participate in RedBird Math individualized learning path • Participate in Reflex Math individualized learning path • Utilize McGraw Hill eTools for online manipulative support • Utilize McGraw Hill Personal Tutor to demonstrate a model/sample • Utilize McGraw Hill online lesson animations to demonstrate a model/sample • Utilize the McGraw Hill English Language Learner Guide to provide foundational support • Specific use of modalities - kinesthetic, visual, auditory, tactile • The multilingual eGlossary can support vocabulary Learning Station • My Learning Station student-led activity

Chapter Fourteen: Geometry

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **4.M.5 -** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
- **4.M.4** - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
    a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 th of the circle is called a “one-degree angle,” and can be used to measure angles.
    b. An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.
- **4.M.6**-Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

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- **4.G.1 -** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- **4.G.2 -** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- **4.G.3 -** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

NJSLS for Mathematical Practice

- **1. -** Make sense of problems and persevere in solving them.
- **2. -** Reason abstractly and quantitatively.
- **3. -** Construct viable arguments and critique the reasoning of others.
- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.
- **8. -** Look for and express regularity in repeated reasoning.

Central Idea / Enduring Understanding:

Students will…

- draw examples of parallel lines and perpendicular lines.
- measure angles.
- classify triangles.
- classify quadrilaterals.
- identify figures that have line symmetry and draw lines of symmetry.

Essential/Guiding Question:

- How are different ideas about geometry connected?

Content:

- Draw Points, Lines, and Rays
- Draw Parallel and Perpendicular Lines
- Hands On: Model Angles
- Classify Angles
- Measure Angles
- Draw Angles
- Solve Problems with Angles
- Triangles
- Quadrilaterals
- Draw Lines of Symmetry
- Problem-Solving Investigation: Make a Model

Skills (Objectives):

- Draw points, lines, line segments, and rays and identify these in two-dimensional figures.
- Draw parallel, intersecting, and perpendicular lines and identify these in two-dimensional figures.
- Understand concepts of angles and angle measurement.
- Use concepts of angle measurement to classify angles.
- Use a protractor to measure angles to the nearest degree.
- Use a protractor to draw angles of a specified measure.
- Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical situations.
- Classify triangles based on angle measure and describe triangles using their attributes.
- Classify quadrilaterals using their attributes.
- Identify figures with line symmetry and draw lines of symmetry.
- Solve problems by making a model.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.RF.4.3.** Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- **L.RF.4.4.** Read with sufficient accuracy and fluency to support comprehension.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly

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- **SL.AS.4.6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.
- **L.KL.4.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **L.WF.4.3.** Demonstrate command of the conventions of writing, including those listed under grade three foundational skills
- **L.VL.4.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

NJSLS for Social Studies

- **6.1.5.GeoHE.2:** Cite examples of how technological advances have changed the environment in New Jersey and the United States (e.g., energy, transportation, communications).
- **6.1.5.HistoryUP.7:** Describe why it is important to understand the perspectives of other cultures in an interconnected world.
- **6.1.5.CivicsHR.4:** Identify actions that are unfair or discriminatory, such as bullying, and propose solutions to address such actions.

NJSLS for Science

- **3-5-ETS1-2 -** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.FP.3 -** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.PB.2 -** Describe choices consumers have with money (e.g., save, spend, donate).
- **9.4.5.CT.1 -** Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.3 -** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4 -** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Summative Assessment:

- My Review
- Reflect
- Chapter 14 - Assessment
- Chapter 14 Performance Task

Formative Assessments:

- Quick Draw
- Quick Write
- Exit Slip
- Sequence
- Response Cards
- Error Analysis
- Graphic Organizer
- Definition
- Application Cards
- Talk Math
- Independent Practice
- Check My Progress

Benchmark Assessment:

- Benchmark Assessment

Stage 3: Learning Plan

Learning Opportunities/Strategies:

Chapter Introduction

Objective: Use diagnostic resources to determine which level of instruction is needed to help students get ready for the chapter.

Resources:

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Chapter Introduction: ● Introduce the chapter by discussing the theme, "Sign Me Up!" ● View online video to spark a discussion about how math is used in signs. ● Introduce the Essential Question: "How are different ideas about geometry connected?"	**TE pg. 861** ● TE/SE pg. 861 ● Online Video ● TE/SE pg. 861
Am I Ready? ● Complete the "Am I Ready?" assessment to determine if students have the foundational skills they need in order to successfully learn the new skills and concepts presented in this chapter.	**TE/SE pg. 863**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 864** ● Review Vocabulary: rectangle, square, triangle
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 865-870** ● New Vocabulary: acute angle, acute triangle, angle, degree, endpoint, intersecting, line, line of symmetry, line segment, line symmetry, obtuse angle, obtuse triangle, one-degree angle, parallel (∥), parallelogram, perpendicular (⊥), point, ray, rectangle, rhombus, right angle (¬), right triangle, square, trapezoid
My Foldable ● This foldable provides practice with the metric system of measurement.	**TE/SE pg. 871-872**
Wrap Up ● Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Online** ● Must print letter
Learning Opportunities/Strategies: **Lesson 1: Draw Points, Lines, and Rays** **Objective:** Students will draw points, lines, line segments, and rays and identify these in two-dimensional figures.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 873A** ● New Vocabulary: line, line segment, endpoint, point, ray
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 873B**
Practice: ● Math in My World ● Guided Practice	**TE/SE pg. 873-875** ● Example 1 ● Rulers

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• Talk Math ○ Students turn and talk: “How are lines and line segments alike? How are they different?” • Independent Practice	• Assign On Level set: 7-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 876**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 877-878** • Quick Write, TE pg. 878 • SE pg. 877-878
Learning Opportunities/Strategies: **Lesson 2: Draw parallel and Perpendicular Lines** **Objective:** Students will draw parallel, intersecting, and perpendicular lines and identify these in two-dimensional figures.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: • Remind students of the Essential Question: “How are different ideas about geometry connected?” • Developing Vocabulary • Problem of the Day	**TE pg. 879A** • New Vocabulary:parallel (ll), perpendicular (⊥), intersecting
Build: • Investigate the Math: Explore, Model, Extend	**TE/SE pg. 879B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Name a real-world example of parallel line segments and intersecting line segments.” • Independent Practice	**TE/SE pg. 879-881** • Example 1 • Rulers • Assign On Level set: 3, 6-13
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 882**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 883-884** • Exit Slip, TE pg. 884 • SE pg. 883-884
Learning Opportunities/Strategies: **Lesson 3: Hands On: Model Angles** **Objective:** Students will understand concepts of angles and angle measurement.	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 887A** ● New Vocabulary: angle
Build: ● Build It	**TE/SE pg. 887** ● Rulers
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 888-889**
Apply: ● Apply It ● Write About It	**TE/SE pg. 890**
Wrap Up: ● Assign homework	**TE pg. 891-892** ● SE pg. 891-892
Learning Opportunities/Strategies: **Lesson 4: Classify Angles** **Objective:** Students will use concepts of angle measurement to classify angles.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 893A** ● Review Vocabulary: acute angle, degree (°), obtuse angle, right angle, one-degree angle
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 893B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "How many one-degree angles does a right angle turn through?" ● Independent Practice	**TE/SE pg. 893-895** ● Example 1 ● Rulers ● Oak Tag Paper ● Paper Fasteners ● Assign On Level set: 3, 7-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 896**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 897-898** ● Quick Write, TE pg. 898 ● SE pg. 897-898
Learning Opportunities/Strategies: **Lesson 5: Measure Angles** **Objective:** Students will use a protractor to measure angles to the nearest degree.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 899A** ● Review Vocabulary: angle
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 899B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to use a protractor." ● Independent Practice	**TE/SE pg. 899-901** ● Example 1 ● Rulers ● Protractors ● Assign On Level set: 6-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 902**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 903-904** ● Response Cards, TE pg. 904 ● SE pg. 903-904
Learning Opportunities/Strategies: **Lesson 6: Draw Angles** **Objective:** Students will use a protractor to draw angles of a specified measure.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 905A** ● Review Vocabulary: angle, ray
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 905B**

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Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Describe how you would draw a 90° angle without using a protractor?” ● Independent Practice	**TE/SE pg. 905-907** ● Example 1 ● Rulers ● Protractors ● Assign On Level set: 6-14
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 908**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 909-910** ● Quick Draw, TE pg. 910 ● SE pg. 909-910
Learning Opportunities/Strategies: **Lesson 7: Solve Problems with Angles** **Objective:** Students will solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical situations.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “How are different ideas about geometry connected?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 911A** ● Review Vocabulary: unknown
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 911B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “How can the measures of parts of an angle be used to find the combined measure?” ● Independent Practice	**TE/SE pg. 911-913** ● Example 1 ● Assign On Level set: 5-13
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 914**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 915-916** ● Exit Slip, TE pg. 916 ● SE pg. 915-916
Learning Opportunities/Strategies: **Lesson 8: Triangles**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will classify triangles based on angle measure and describe triangles using their attributes.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 919A** ● New Vocabulary: acute triangle, obtuse triangle, right triangle
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 919B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Is it possible for a triangle to have a pair of parallel sides? Explain." ● Independent Practice	**TE/SE pg. 919-921** ● Example 1 ● Assign On Level set: 5-16
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 922**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 923-924** ● Graphic Organizer, TE pg. 924 ● Small Index Cards ● SE pg. 923-924
Learning Opportunities/Strategies: **Lesson 9: Quadrilaterals**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will classify quadrilaterals using their attributes.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 925A** ● New Vocabulary: parallelogram, rectangle, rhombus, trapezoid, square
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 925B**
Practice: ● Math in My World ● Guided Practice ● Talk Math	**TE/SE pg. 925-927** ● Example 1

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○ Students turn and talk: "Explain why a square is also a parallelogram." ● Independent Practice	● Assign On Level set: 4-14
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 928**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 929-930** ● Graphic Organizer, TE pg. 930 ● SE pg. 929-930
Learning Opportunities/Strategies: **Lesson 10: Relate Area and Perimeter** **Objective:** Students will identify figures with line symmetry and draw lines of symmetry.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 931A** ● New Vocabulary: line of symmetry, line symmetry
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 931B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Name one of the capital letters of the alphabet that does not have any line symmetry." ● Independent Practice	**TE/SE pg. 931-933** ● Example 1 ● Assign On Level set: 4, 5, 11-21
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 934**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 935-936** ● Quick Draw, TE pg. 936 ● SE pg. 935-936
Learning Opportunities/Strategies: **Lesson 11: Problem Solving Investigation: Make a Model** **Objective:** Students will solve problems by making a model.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**

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Launch: ● Remind students of the Essential Question: "How are different ideas about geometry connected?" ● Problem of the Day	**TE pg. 937A**
Build: ● Prepare ● Learn the Strategy	● TE pg. 937B ● TE/SE pg. 937
Practice: ● Practice the Strategy	**TE/SE pg. 938**
Apply: ● Apply the Strategy ● Brain Builders ● Review the Strategies	**TE/SE pg. 939-940** ● Assign On Level set: 2, 3, 5-7
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 941-942** ● Exit Slip, TE pg. 942 ● SE pg. 941-942
Learning Opportunities/Strategies: **Chapter 14 Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter.	**Resources:**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Essential Question: ● Remind students of the Essential Question: "How are different ideas about geometry connected?"	
Review: ● Vocabulary Check ● Concept Check ● Brain Builders	**TE/SE pg. 943** **TE/SE pg. 944** **TE/SE pg. 945**
Reflect: ● Complete the graphic organizer.	**TE/SE pg. 946**
Assign homework:	**n/a**

Differentiation *Please note: Teachers who have students with 504 plans that require curricular accommodations are to refer to Struggling and/or Special Needs Section for differentiation.

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
Small Group ● Utilize gradual release model ● Modify problem set to "Beyond Level" ● Focus on critical thinking questions at the end of the lesson. Technology	Small Group ● Utilize gradual release model ● Modify problem set to "On Level" ● Utilize "Reteach" problem-set to model questions.	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model	Small Group ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● Utilize gradual release model

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● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Focus on critical thinking questions at the end of the lesson. Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	● Modify problem set to “Approaching Level” ● Utilize “Reteach” problem-set to model questions. ● Focus on critical thinking questions at the end of the lesson. ● Pair with on grade level or higher-achieving students to problem solve Technology ● Participate in RedBird Math individualized learning path ● Participate in Reflex Math individualized learning path ● Utilize McGraw Hill eTools for online manipulative support ● Utilize McGraw Hill Personal Tutor to demonstrate a model/sample ● Utilize McGraw Hill online lesson animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide foundational support ● Specific use of modalities - kinesthetic, visual, auditory, tactile ● The multilingual eGlossary can support vocabulary Learning Station ● My Learning Station student-led activity

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Math Pacing Guide
Grade 4

MP	Chapter Breakdown	# of days allotted	# of days subtotal	# of days cumulative
MP1	McGraw Hill: My Math - Chapter 1 - Place Value		10	10
	• Chapter Introduction	1		
	• Lessons 1-6 (@ 1 lesson per day)	6		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Days	1		
MP1	McGraw Hill: My Math - Chapter 2 - Add and Subtract Whole Numbers		13	23
	• Chapter Introduction	1		
	• Lessons 1-9 (@ 1 lesson per day)	9		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Days	1		
MP1	McGraw Hill: My Math - Chapter 3 - Understand Multiplication and Division		12	35
	• Chapter Introduction	1		
	• Lessons 1-8 (@ 1 lesson per day)	8		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Days	1		
MP1	Benchmark Test #1 (covers chapters 1-3).	1		36
MP1-2	McGraw Hill: My Math - Chapter 4 - Multiply with One-Digit Numbers		15	51
	• Chapter Introduction	1		
	• Lessons 1-11 (@ 1 lesson per day)	11		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP2	McGraw Hill: My Math - Chapter 5 - Multiply with Two-Digit Numbers		10	61
	• Chapter Introduction	1		
	• Lessons 1-6 (@ 1 lesson per day)	6		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		

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	• Flex Day	1		
MP2	McGraw Hill: My Math - Chapter 6 - Divide by a One-Digit Number		15	76
	• Chapter Introduction	1		
	• Lessons 1-11 (@ 1 lesson per day)	11		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP2	Benchmark Test #2 (covers chapters 4-6).	1		77
MP2-3	McGraw Hill: My Math - Chapter 7 - Patterns and Sequences		13	90
	• Chapter Introduction	1		
	• Lessons 1-9 (@ 1 lesson per day)	9		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP3	McGraw Hill: My Math - Chapter 8 - Fractions		16	106
	• Chapter Introduction	1		
	• Lessons 1-10 (@ 1 lesson per day) and Chapter project after lesson 8	12		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP3	McGraw Hill: My Math - Chapter 9 - Operations with Fractions		13	119
	• Chapter Introduction	1		
	• Lessons 1-9 (@ 1 lesson per day)	9		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP3	McGraw Hill: My Math - Chapter 10 - Fractions and Decimals		12	131
	• Chapter Introduction	1		
	• Lessons 1-8 (@ 1 lesson per day)	8		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP3	Benchmark Test #3 (covers chapters 7-10).	1		132
MP3-4	McGraw Hill: My Math - Chapter 11 - Customary Measurement		14	146
	• Chapter Introduction	1		

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	• Lessons 1-10 (@ 1 lesson per day)	10		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP4	McGraw Hill: My Math - Chapter 12 - Metric Measurement		10	156
	• Chapter Introduction	1		
	• Lessons 1-6 (@ 1 lesson per day)	6		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP4	McGraw Hill: My Math - Chapter 13 - Perimeter and Area		9	165
	• Chapter Introduction	1		
	• Lessons 1-5 (@ 1 lesson per day)	5		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP4	McGraw Hill: My Math - Chapter 14 - Geometry		14	179
	• Chapter Introduction	1		
	• Lessons 1-11 (@ 1 lesson per day)	11		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	0		
MP4	Benchmark Test 4 (covers chapters 1-14).	1		180