Fifth Grade Mathematics

Chapter 1: Place Value

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NBT.1 -** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.
- **5.NBT.3 -** Read, write, and compare decimals to thousandths.
- **5.NBT.3a -** Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).
- **5.NBT.3b -** Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

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 a place-value chart.
- represent fractions with denominators of 10, 100, or 1,000 as decimals.
- use place value to compare decimals.
- use place value to write decimals in expanded form.
- use place value and the four-step plan to solve problems.

Essential/Guiding Question:

- How does the position of a digit in a number relate to its value?

Content:

- Place Value Through Millions
- Compare and Order Whole Numbers through Millions
- Hands On: Model Fractions and Decimals
- Represent Decimals
- Hands On: Understand Place Value
- Place Value through Thousandths
- Compare Decimals
- Order Whole Numbers and Decimals
- Problem-Solving Investigation: Use the Four-Step Plan

Skills (Objectives):

- Read and write whole numbers through millions.
- Compare and order whole numbers through millions.
- Use models to relate decimals to fractions.
- Represent fractions that name tenths, hundredths, and thousandths as decimals.
- Understand place value in decimal numbers.
- Read and write decimals in standard form, expanded form, and word form.
- Compare decimals.
- Order whole numbers and decimals.
- Solve problems using the four-step plan.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.

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- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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 - Career Readiness, Life Literacies, and Key Skills

- **9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
- **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.IML.2**: Create a visual representation to organize information about a problem or issue.
- **9.4.5.IML.3**: Represent the same data in multiple visual formats in order to tell a story about the data.
- **9.4.5.TL.2**: Sort and filter data in a spreadsheet to analyze findings.
- **9.4.5.TL.5**: Collaborate digitally to produce an artifact.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Summarize
- Direct Paraphrasing
- Debriefing
- Analogy Prompt
- Ticket Out the Door
- Vocabulary
- Application Cards
- Error Analysis
- Self-Assessment
- Talk Math

Summative Assessment:

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

Benchmark Assessment:

- n/a

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• Independent Practice • Check My Progress	
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 Go Outdoors!" • View online video to spark a discussion about how math is used in things outdoors. • Introduce the Essential Question: "How does the position of a digit in a number relate to its value?" **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. **My Math Words** • Review vocabulary words and complete "My Math Words" activity. **My Vocabulary Cards** • Introduce vocabulary words and complete "My Vocabulary Cards" activity. **My Foldable** • This foldable reviews and expands students' knowledge of place value of whole numbers. Complete the "My Foldable" activities. **Wrap Up** • Math at Home: Family Letter - Student signs it and presents it to parents/guardians.	**Resources:** **TE pg. 1** • TE/SE pg. 1 • Online Video • TE/SE pg. 1 **TE/SE pg. 3** **TE/SE pg. 4** • Review Vocabulary: comma, hundreds, hundred thousands, ones, tens, ten thousands, thousands **TE/SE pg. 5-8** • New Vocabulary: decimal point, decimal, equivalent decimals, expanded form, period, place, standard form, place value **TE/SE pg. 9-10** **Online** • Must print letter
Learning Opportunities/Strategies: **Lesson 1: Place Value through Millions** **Objective:** Students will read and write whole numbers through millions. **Launch:** • Remind students of the Essential Question: "How does the position of a digit in a number relate to its value?"	**Resources:** **Follow corresponding Lesson Presentation Slides.** **TE pg. 11A-11B**

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● Developing Vocabulary ● Problem of the Day	● New Vocabulary: period, standard form, expanded form, place, place value, place-value chart
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 11B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Explain how the value of the highlighted digit in the number 26,077,928 compares to the digit to its left.” ● Independent Practice	**TE/SE pg. 11-13** ● Assign On Level set: 4-14 (even), 15-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 14**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 15-16** ● Direct Paraphrasing TE pg. 16 ● SE pg. 15-16
Learning Opportunities/Strategies: **Lesson 2 - Compare and Order Whole Numbers through Millions** **Objective:** Students will compare and order whole numbers through millions.	**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 the position of a digit in a number relate to its value?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 17A-17B** ● Review Vocabulary: is greater than (>), is less than (<), is equal to (=)
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 17B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “When ordering whole numbers, explain what to do when	**TE/SE pg. 17-19**

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the digits in the same place have the same value." ● Independent Practice	● Assign On Level set: 4-18 (even), 20-23
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 20**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 21-22** ● Debriefing TE pg. 22 ● SE pg. 21-22
Learning Opportunities/Strategies: **Lesson 3 - Hands On** **Objective:** Students will use models to relate decimals to 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 does the position of a digit in a number relate to its value?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 23A-23B** ● New Vocabulary: decimal, decimal point
Build: ● Draw It	**TE/SE pg. 23** ● eTools
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 23-25** ● eTools ● eTools
Apply: ● Apply It ● Write About It	**TE/SE pg. 26**
Wrap Up: ● Assign homework	**TE/SE pg. 27-28**
Learning Opportunities/Strategies: **Lesson 4 - Represent Decimals** **Objective:** Students will represent fractions that name tenths, hundredths, and thousands as decimals.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 29A-29B**

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● Remind students of the Essential Question: “How does the position of a digit in a number relate to its value?” ● Developing Vocabulary ● Problem of the Day	● Review Vocabulary: decimal
Build: ● Investigate the Math: Explore, Model, Extend	**TE/SE pg. 29-31**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Describe a rule for writing fractions like 8/100 and 32/1,000 as decimals. ● Independent Practice	● Assign On Level set: 4-10 (even), 11-13, 16, 17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 32**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 33-34** ● Ticket Out the Door TE pg. 34 ● SE pg. 33-34
Learning Opportunities/Strategies: **Lesson 5 - Hands On: Understand Place Value** **Objective:** Students will understand place value in decimal 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 the position of a digit in a number relate to its value?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 37A-37B**
Build: ● Draw It	**TE/SE pg. 37** ● Hundredths grid
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 37-39**
Apply: ● Apply It ● Write About It	**TE/SE pg. 40**

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Wrap Up: ● Assign homework	**TE/SE pg. 41-42**
Learning Opportunities/Strategies: **Lesson 6 - Place Value Through Thousandths** **Objective:** Students will read and write decimals in standard form, expanded form, and word form.	**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 the position of a digit in a number relate to its value?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 43A-43B** ● Review Vocabulary: hundreds, hundredths, ones, place value, tens, tenths, thousands, thousandths
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 43B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Name the advantage of using 0.8 instead of 8/10." ● Independent Practice	**TE/SE pg. 43-45** ● Assign On Level set: 8-24 (even), 25
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 46**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 47-48** ● Ticket Out the Door TE pg. 48 ● SE pg. 47-48
Learning Opportunities/Strategies: **Lesson 7 - Compare Decimals** **Objective:** Students will compare decimals.	**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 the position of a digit in a number relate to its value?"	**TE pg. 49A-49B**

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• Developing Vocabulary • Problem of the Day	• New Vocabulary: equivalent decimals
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 49B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Describe how you know if two decimals are equivalent.” • Independent Practice	**TE/SE pg. 49-51** • Assign On Level set: 4-14 (even), 15-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 52**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 53-54** • Ticket Out the Door TE pg. 54 • SE pg. 53-54
Learning Opportunities/Strategies: **Lesson 8 - Order Whole Numbers and Decimals** **Objective:** Students will order whole numbers and decimals.	**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 the position of a digit in a number relate to its value?” • Developing Vocabulary • Problem of the Day	**TE pg. 55A-55B** • Review Vocabulary: decimal
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 55B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Discuss different steps that make ordering numbers easier.” • Independent Practice	**TE/SE pg. 55-57** • Assign On Level set: 6-12 (even), 15-19
Apply: • Brain Builders	**TE/SE pg. 58**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 59-60** ● Error Analysis TE pg. 60 ● SE pg. 59-60
Learning Opportunities/Strategies: **Lesson 9 - Problem Solving Investigation - Strategy: Use the Four-Step Plan** **Objective:** Draw a diagram 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 does the position of a digit in a number relate to its value?" ● Problem of the Day	**TE pg. 61A-61B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 61B ● TE/SE pg. 61
Practice: ● Practice the Strategy	**TE/SE pg. 62**
Apply: ● Apply the Strategy ● Review the Strategy	**TE/SE pg. 63-64** ● Assign On Level set: 2-10 (even)
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 65-66** ● Summarize TE pg. 66 ● SE pg. 65-66
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 the position of a digit in a number relate to its value?"	
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 67-69**

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Reflect: **Assign homework:**	**TE/SE pg. 70** **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	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

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		• Utilize the McGraw Hill English Language Learner Guide to provide	• 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 2: Multiply Whole Numbers

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NBT.2 -** Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
- **5.NBT.5 -** With accuracy and efficiency, multiply 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:	**Essential/Guiding Question:**
Students will… • use patterns to multiply a number by a power of 10. • use partial products to multiply two numbers. • use the Distributive Property to multiply whole numbers. • estimate the product of two whole numbers. • use the standard algorithm to multiply by two-digit numbers.	• What strategies can be used to multiply whole numbers?
Content: • Prime Factorization • Hands On: Prime Factorization Patterns • Powers and Exponents	**Skills (Objectives):** • Find the prime factorization of numbers. • Explore patterns in prime factorization. • Use powers and exponents in expressions.

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• Multiplication Patterns • Problem-Solving Investigation: Make a Table • Hands On: Use Partial Products and the Distributive Property • The Distributive Property • Estimate Products • Multiply by One-Digit Numbers • Multiply by Two-Digit Numbers	• Use basic facts and patterns to multiply multiples of 10, 100, 1,000 mentally. • Make a table to solve problems. • Use models to relate decimals to fractions. • Use the Distributive Property to multiply mentally • Estimate products by using rounding and compatible numbers. • Multiply up to a three-digit number by a one-digit number. • Multiply up to a three-digit number by a two-digit number.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
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- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **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.GCA.1**: Analyze how culture shapes individual and community perspectives and points of view.
- **9.4.5.IML.1**: Evaluate digital sources for accuracy, perspective, credibility and relevance (e.g., Social Studies Practice - Gathering and Evaluating Sources).
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue.
- **9.4.5.TL.2**: Sort and filter data in a spreadsheet to analyze findings.

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Stage 2: Assessment Evidence

Diagnostic Assessment:
- Am I Ready?

Formative Assessments:
- k Write
- Think-Pair-Share
- Make Sense of Problems
- Summarize
- Ticket Out the Door
- Directed Paraphrasing
- Sequence
- Self Assessment
- Make a Table
- Analogy Prompt
- Application Cards
- Talk Math
- Independent Practice
- Check My Progress

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

Benchmark Assessment:
- n/a

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, "Taking Care of My Pets" ● View online video to spark a discussion about how math is used in pet care. ● Introduce the Essential Question: "What strategies can be used to multiply whole numbers?"	**TE pg. 71** ● TE/SE pg. 71 ● Online Video ● TE/SE pg. 71
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. 73**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 74** ● Review Vocabulary: prime numbers, composite numbers
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 75-78**

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	● New Vocabulary: base, compatible numbers, cubed, Distributive Property exponent, power, power of 10, prime factorization
My Foldable ● This foldable shows that the prime factorization of one number can be found multiple ways. Complete the "My Foldable" activities.	**TE/SE pg. 79-80**
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: Prime Factorization** **Objective:** Students will find the prime factorization of numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 81A-81B** ● New Vocabulary: prime factorization
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 81B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "What are the first ten prime numbers?" ● Independent Practice	**TE/SE pg. 81-83** ● Assign On Level set: 2-12 (even), 13-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 84**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 85-86** ● Quick Write TE pg. 86 ● SE pg. 85-86
Learning Opportunities/Strategies: **Lesson 2 - Hands On - Prime Factorization Patterns** **Objective:** Students will explore patterns in prime factorization.	**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: “What strategies can be used to multiply whole numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 87A-87B**
Build: ● Build It	**TE/SE pg. 87-88** ● hole punch, construction paper
Practice: ● Talk About It ● Practice It	**TE/SE pg. 88-89** ● hole punch, construction paper
Apply: ● Apply It ● Write About It	**TE/SE pg. 90**
Wrap Up: ● Assign homework	**TE/SE pg. 91-92**
Learning Opportunities/Strategies: **Lesson 3 - Powers and Exponents** **Objective:** Students will use powers and exponents in expressions.	**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 be used to multiply whole numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 93A-93B** ● New Vocabulary: base, cubed, exponent, power, squared
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 a factor tree helps you to write the prime factorization of a number using exponents.” ● Independent Practice	**TE/SE pg. 93-95** ● Assign On Level set: 2-16 (even), 17-19
Apply:	**TE/SE pg. 96**

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• Problem Solving • Brain Builders	
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 97-98** • Ticket Out the Door TE pg. 98 • SE pg. 97-98
Learning Opportunities/Strategies: **Lesson 4 - Multiplication Patterns** **Objective:** Students will use basic facts and patterns to multiply multiples of 10, 100, and 1,000 mentally.	**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 be used to multiply whole numbers?" • Developing Vocabulary • Problem of the Day	**TE pg. 99A-99B** • New Vocabulary: powers of 10
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 you could find the product of 29 and 10^3 mentally." • Independent Practice	**TE/SE pg. 99-101** • Assign On Level set: 4-12 (even), 13-20
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 102**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 103-104** • Sequence TE pg. 104 • SE pg. 103-104
Learning Opportunities/Strategies: **Lesson 5 - Problem Solving Investigation - Strategy: Make a Table** **Objective:** Draw a diagram to solve problems.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 105A-105B**

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• Remind students of the Essential Question: “What strategies can be used to multiply whole numbers?” • Problem of the Day **Build:** • Prepare • Learn the Strategy **Practice:** • Practice the Strategy **Apply:** • Apply the Strategy • Review the Strategy **Wrap Up:** • Complete formative assessment • Assign homework	 • TE pg. 105B • TE/SE pg. 105 **TE/SE pg. 106** **TE/SE pg. 107-108** • Assign On Level set: 2-8 (even) **TE pg. 109-110** • Make a Table TE pg. 110 • SE pg. 109-110
Learning Opportunities/Strategies: **Lesson 6 - Hands On - Use Partial Products and the Distributive Property** **Objective:** Students will explore multiplication by using area models. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: “What strategies can be used to multiply whole numbers?” • Developing Vocabulary • Problem of the Day **Build:** • Draw It **Practice:** • Try It • Talk About It • Practice It **Apply:** • Apply It • Write About It **Wrap Up:** • Assign homework	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 113A** **TE/SE pg. 113** **TE/SE pg. 113-115** **TE/SE pg. 116** **TE/SE pg. 117-118**

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Learning Opportunities/Strategies:	Resources:
Lesson 7 - The Distributive Property	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will use the Distributive Property to multiply mentally.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 119A-119B** ● New Vocabulary: Distributive Property
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 119B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to use the Distributive Property to find a product mentally." ● Independent Practice	**TE/SE pg. 119-121** ● Assign On Level set: 4-10 (even), 11-15
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 122**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 123-124** ● Ticket Out the Door TE pg. 124 ● SE pg. 123-124
Learning Opportunities/Strategies:	**Resources:**
Lesson 8 - Estimate Products	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will estimate products by using rounding and compatible numbers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 125A-125B** ● New Vocabulary: compatible numbers
Build:	**TE pg. 125B**

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● Investigate the Math: Explore, Model, Extend	
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Show two different ways you could estimate 312 x 18.” ● Independent Practice	**TE/SE pg. 125-127** ● calculator ● Assign On Level set: 4-14 (even), 15-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 128**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 129-130** ● Ticket Out the Door TE pg. 130, index card ● SE pg. 129-130
Learning Opportunities/Strategies: **Lesson 9 - Multiply by One-Digit Numbers** **Objective:** Students will multiply up to a three-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: “What strategies can be used to multiply whole numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 131A-131B** ● Review Vocabulary: factor, product
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 131B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Describe each step for finding 416 x 3.” ● Independent Practice	**TE/SE pg. 131-133** ● Assign On Level set: 2-14 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 134**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 135-136** ● Quick Write TE pg. 136 ● SE pg. 135-136

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Learning Opportunities/Strategies:	Resources:
Lesson 10 - Multiply by Two-Digit Numbers **Objective:** Students will multiply up to a three-digit number by a two-digit number.	**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 be used to multiply whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 137A-137B** ● Review Vocabulary: estimate, product
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 137B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Describe how addition is used when you multiply two-digit numbers." ● Independent Practice	**TE/SE pg. 137-139** ● Assign On Level set: 2-14 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 140**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 141-142** ● Sequence TE pg. 142 ● SE pg. 141-142
Learning Opportunities/Strategies: **Chapter 2 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: "What strategies can be used to multiply whole numbers?"	
Review: ● Vocabulary Check ● Concept Check	**TE/SE pg. 145-147**

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• Problem Solving • Brain Builders **Reflect:** **Assign homework:**	 **TE/SE pg. 148** **Fluency Practice TE/SE pg. 143-144**

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	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	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

	Learner Guide to provide	demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	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 3: Divide by a One-Digit Divisor

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NBT.6 -** Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.

Central Idea / Enduring Understanding:	Essential/Guiding Question:
Students will… ● make a model for division. ● divide mentally. ● estimate quotients. ● use the Distributive Property to find quotients of three-digit dividends and one-digit divisors. ● solve division problems that result in two-, three-, and four-digit quotients.	● What strategies can be used to divide whole numbers?
Content: ● Relate Division to Multiplication ● Hands On: Division Models	**Skills (Objectives):** ● Understand how division and multiplication are related.

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• Two-Digit Dividends • Division Patterns • Estimate Quotients • Hands On: Division Models with Greater Numbers • Hands On: Distributive Property and Partial Quotients • Divide Three- and Four-Digit Dividends • Place the First Digit • Quotients with Zeros • Hands On: Use Models to Interpret the Remainder • Interpret the Remainder • Problem-Solving Investigation: Determine extra or Missing Information	• Explore division using models. • Carry out division with and without remainders. • Use basic facts and patterns to divide multiples of 10, 100, and 1,000 mentally. • Estimate quotients by using rounding and compatible numbers. • Explore division with greater numbers using models. • Divide using the Distributive Property and partial quotients. • Divide up to a four-digit number by a one-digit number. • Understand how to place the first digit in a quotient. • Solve division problems that result in quotients that have zeros. • Explore how to interpret the remainder in a division problem. • Interpret the remainder in a division problem. • Identify extra information or missing information needed to solve a problem.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.
- **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

- **9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue.

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- **9.4.5.IML.3**: Represent the same data in multiple visual formats in order to tell a story about the data.
- **9.4.5.IML.6**: Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions.
- **9.4.5.TL.3**: Format a document using a word processing application to enhance text, change page formatting, and include appropriate images, graphics, or symbols.
- **9.4.5.TL.4**: Compare and contrast artifacts produced individually to those developed collaboratively.
- **9.4.5.TL.5**: Collaborate digitally to produce an artifact.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Vocabulary
- Quick Write
- Use Appropriate Tools
- Send a Problem
- Turn to Your Partner
- Reflections
- Ticket Out the Door
- Direct Paraphrasing
- Sequence
- Summarize
- Send a Problem
- Think-Pair-Share
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:

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

Benchmark Assessment:

- Benchmark Test 1 (covers chapters 1-3)

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 Help Others!” • View online video to spark a discussion about how math is used when helping others.” • Introduce the Essential Question: “What strategies can be used to divide whole numbers?”	**TE pg. 149** • TE/SE pg. 149 • Online Video • TE/SE pg. 149
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. 151**
My Math Words	**TE/SE pg. 152**

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• Review vocabulary words and complete “My Math Words” activity.	• Review Vocabulary: compatible numbers, multiples, place value, product
My Vocabulary Cards • Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 153-154** • New Vocabulary: dividend, divisor, fact family, partial quotients, quotient, remainder, unknown, variable
My Foldable • This foldable will be used to take notes of important key concepts throughout the chapter. Complete the “My Foldable” activities.	**TE/SE pg. 155-156**
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 Division to Multiplication** **Objective:** Students will understand how division and multiplication are related.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Launch: • Remind students of the Essential Question: “What strategies can be used to divide whole numbers?” • Developing Vocabulary • Problem of the Day	**TE pg. 157A-157B** • New Vocabulary: variable, fact family, unknown
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 157B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Describe how you could use multiplication to find 21 ÷ 7 - x.” • Independent Practice	**TE/SE pg. 157-159** • Assign On Level set: 4-18 (even), 19-23
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 160**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 161-162** • Quick Write TE pg. 162 • SE pg. 161-162
Learning Opportunities/Strategies: **Lesson 2 - Hands On - Division Models**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will explore division using models.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to divide whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 163A**
Build: ● Build It	**TE/SE pg. 163** ● base-ten blocks
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 164-165** ● base-ten blocks ● base-ten blocks ● base-ten blocks
Apply: ● Apply It ● Write About It	**TE/SE pg. 166** ● base-ten blocks
Wrap Up: ● Assign homework	**TE/SE pg. 167-168**
Learning Opportunities/Strategies: **Lesson 3 - Two-Digit Dividends**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will carry out division with and without remainders.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to divide whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 169A-169B** ● New Vocabulary: dividend, divisor, quotient, remainder
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 169B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "What should you do if the remainder is greater than or equal to the divisor?"	**TE/SE pg. 169-171**

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• Independent Practice	• Assign On Level set: 4-14 (even), 15-18
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 172**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 173-174** • Turn to Your Partner TE pg. 174 • SE pg. 173-174
Learning Opportunities/Strategies: **Lesson 4 - Division Patterns** **Objective:** Students will use basic facts and patterns to divide multiples of 10, 100, and 1,000 mentally.	**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 be used to divide whole numbers?" • Developing Vocabulary • Problem of the Day	**TE pg. 175A-175B** • Review Vocabulary: multiple, tens
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 175B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how you could find the product of 29 and 10^3 mentally." • Independent Practice	**TE/SE pg. 175-177** • Assign On Level set: 2-18 (even), 19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 178**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 179-180** • Ticket Out the Door TE pg. 180 • SE pg. 179-180
Learning Opportunities/Strategies: **Lesson 5 - Estimate Quotients** **Objective:** Students will estimate quotients by using rounding and compatible numbers.	**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: “What strategies can be used to divide whole numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 183A-183B** ● Review Vocabulary: compatible numbers
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 183B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Explain how you could use compatible numbers to estimate 272 ÷ 4.” ● Independent Practice	**TE/SE pg. 183-185** ● Assign On Level set: 2-12 (even), 14-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 186**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 187-188** ● Sequence TE pg. 188 ● SE pg. 187-188
Learning Opportunities/Strategies: **Lesson 6 - Hands On - Division Models with Greater Numbers** **Objective:** Students will explore division with greater numbers using models.	**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 be used to divide whole numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 189A** ● n/a
Build: ● Build It	**TE/SE pg. 189** ● base-ten blocks
Practice: ● Try It ● Talk About It ● Practice It	**TE/SE pg. 189-191** ● base-ten blocks ● base-ten blocks
Apply: ● Apply It	**TE/SE pg. 192** ● base-ten blocks

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• Write About It **Wrap Up:** • Assign homework	 **TE/SE pg. 193-194**
Learning Opportunities/Strategies: **Lesson 7 - Hands On - Division Models with Greater Numbers** **Objective:** Students will divide using the Distributive Property and partial quotients. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "What strategies can be used to divide whole numbers?" • Developing Vocabulary • Problem of the Day **Build:** • Draw It **Practice:** • Try It • Talk About It • Practice It **Apply:** • Apply It • Write About It **Wrap Up:** Assign homework	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 195A** • New Vocabulary: partial quotients **TE/SE pg. 195** **TE/SE pg. 196-198** **TE/SE pg. 199** **TE/SE pg. 199-200**
Learning Opportunities/Strategies: **Lesson 8 - Divide Three- and Four-Digit Dividends** **Objective:** Students will divide up to a four-digit number by a one-digit number. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "What strategies can be used to divide whole numbers?" • Developing Vocabulary • Problem of the Day **Build:** • Investigate the Math: Explore, Model, Extend	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 201A-201B** • Review vocabulary: place value **TE pg. 201B**

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Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Does the quotient of 945 and 8 have two or three digits? Explain.” ● Independent Practice	**TE/SE pg. 201-203** ● Assign On Level set: 2-12 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 204**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 205-206** ● Ticket Out the Door TE pg. 206 ● SE pg. 205-206
Learning Opportunities/Strategies: **Lesson 9 - Place the First Digit** **Objective:** Students will understand how to place the first digit in a quotient.	**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 be used to divide whole numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 209A-209B** ● Review vocabulary: unknown
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 209B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “You want to find 510 ÷ 6. Tell how you know where to place the quotient’s first digit.” ● Independent Practice	**TE/SE pg. 210-211** ● Assign On Level set: 4-14 (even), 15-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 212**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 213-214** ● Quick Write TE pg. 214 ● SE pg. 213-214

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Learning Opportunities/Strategies:	Resources:
Lesson 10 - Quotients with Zeros	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will solve division problems that result in quotients that have zeros.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to divide whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 215A-215B** ● Review vocabulary: quotient
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 215B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Yolanda wants to find 936 ÷ 9. In which place-value position should she place a zero? Explain." ● Independent Practice	**TE/SE pg. 215-217** ● Assign On Level set: 2-12 (even), 14-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 218**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 219-220** ● Think-Pair-Share TE pg. 220 ● SE pg. 219-220
Learning Opportunities/Strategies:	**Resources:**
Lesson 11 - Hands On - Use Models to Interpret the Remainder	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will explore how to interpret the remainder in a division problem.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to divide whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 221A** ● n/a
Build:	**TE/SE pg. 221**

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• Build It	• connecting cubes, paper plates
Practice: • Try It • Talk About It • Practice It	**TE/SE pg. 222-223**
Apply: • Apply It • Write About It	**TE/SE pg. 224**
Wrap Up: • Assign homework	**TE/SE pg. 225-226**
Learning Opportunities/Strategies: **Lesson 12 - Interpret the Remainder** **Objective:** Students will interpret the remainder in 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: "What strategies can be used to divide whole numbers?" • Developing Vocabulary • Problem of the Day	**TE pg. 227A-227B** • Review vocabulary: remainder
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 227B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Discuss the different ways you can interpret the remainder." • Independent Practice	**TE/SE pg. 227-229** • Assign On Level set: 2-8 (even), 9, 10
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 230**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 231-242** • Ticket Out the Door TE pg. 242 • SE pg. 241-242
Learning Opportunities/Strategies: **Lesson 13 - Problem Solving Investigation - Strategy: Determine Extra or Missing Information**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will identify extra information or missing information needed to solve a problem. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "What strategies can be used to divide whole numbers?" ● Problem of the Day **Build:** ● Prepare ● Learn the Strategy **Practice:** ● Practice the Strategy **Apply:** ● Apply the Strategy ● Review the Strategy **Wrap Up:** ● Complete formative assessment ● Assign homework	**Student Homework Page** **TE pg. 233A-233B** ● TE pg. 233B ● TE/SE pg. 233 **TE/SE pg. 234** **TE/SE pg. 235-236** ● Assign On Level set: 2-8 (even) **TE pg. 237-238** ● Ticket Out the Door TE pg. 238 ● SE pg. 237-238
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: "What strategies can be used to divide whole numbers?" **Review:** ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders **Reflect:** **Assign homework:**	**Resources:** **Student Homework Page** **TE/SE pg. 239-241** **TE/SE pg. 242** **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	Small Group	Small Group	Small Group

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• 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	• 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	• 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	• 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 4: Divide by a Two-Digit Divisor

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NBT.6 -** Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.

Central Idea / Enduring Understanding:

Students will…

- divide by a two-digit divisor.
- adjust quotients.
- use models for division.
- estimate quotients.

Essential/Guiding Question:

- What strategies can I use to divide by a two-digit divisor?

Content:

- Estimate Quotients
- Hands On: Divide Using Base-Ten Blocks
- Divide by a Two-Digit Divisor
- Adjust Quotients
- Divide Greater Numbers
- Problem-Solving Investigation: Solve a Simpler Problem

Skills (Objectives):

- Estimate quotients with two-digit divisors.
- Explore dividing by two-digit divisors using models.
- Divide up to a three-digit number by a two-digit number.
- Adjust the quotient when the estimated digit is too high or too low.
- Divide greater numbers by multi-digit divisors.
- Solve problems by solving a simpler problem.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.

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- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

- **9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
- **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.
- **9.4.5.IML.1**: Evaluate digital sources for accuracy, perspective, credibility and relevance (e.g., Social Studies Practice - Gathering and Evaluating Sources).
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue.
- **9.4.5.IML.3**: Represent the same data in multiple visual formats in order to tell a story about the data.
- **9.4.5.IML.5**: Distinguish how media are used by individuals, groups, and organizations for varying purposes.
- **9.4.5.IML.6**: Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions.
- **9.4.5.IML.7**: Evaluate the degree to which information meets a need including social emotional learning, academic, and social.
- **9.4.5.TL.2**: Sort and filter data in a spreadsheet to analyze findings.
- **9.4.5.TL.3**: Format a document using a word processing application to enhance text, change page formatting, and include appropriate images, graphics, or symbols.
- **9.4.5.TL.4**: Compare and contrast artifacts produced individually to those developed collaboratively.
- **9.4.5.TL.5**: Collaborate digitally to produce an artifact.

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Stage 2: Assessment Evidence

Diagnostic Assessment:
- Am I Ready?

Formative Assessments:
- Vocabulary
- Ticket Out the Door
- Response Boards
- Think-Pair-Share
- Quick Write
- Turn to Your Partner
- Talk Math
- Independent Practice
- Check My Progress

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

Benchmark Assessment:
- n/a

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, “Around My School”. ● View online video to spark a discussion about how math is used in schools. ● Introduce the Essential Question: “What strategies can I use to divide by a two-digit divisor?”	**TE pg. 243** ● TE/SE pg. 243 ● Online Video ● TE/SE pg. 243
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. 245**
My Math Words ● Review vocabulary words and complete “My Math Words” activity.	**TE/SE pg. 246** ● Review Vocabulary: dividend, divisor, quotient
My Vocabulary Cards ● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 247-248** ● New Vocabulary: There are no new vocabulary words in this chapter.
My Foldable ● This foldable will provide practice using the steps in order to solve division problems with two-digit numbers. Complete the “My Foldable” activities.	**TE/SE pg. 249-250**

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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 - Estimate Quotients** **Objective:** Students will estimate quotients with two-digit divisors.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Launch: ● Remind students of the Essential Question: "What strategies can I use to divide by a two-digit divisor?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 251A-B** ● Review Vocabulary: estimate, round
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 251B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Is it possible to have more than one estimate for a division problem? Explain. Give an example." ● Independent Practice	**TE/SE pg. 251-253** ● Assign On Level set: 2-12 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 254**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 255-256** ● Ticket Out the Door TE pg. 256 ● SE pg. 255-256
Learning Opportunities/Strategies: **Lesson 2 - Hands On - Divide Using Base-Ten Blocks** **Objective:** Students will explore dividing by two-digit divisors using models.	**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 divide by a two-digit divisor?" ● Problem of the Day	**TE pg. 257A**

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Build: ● Build It	**TE/SE pg. 257** ● base-ten blocks
Practice: ● Talk About It ● Practice It	**TE/SE pg. 258-259** ● base-ten blocks ● base-ten blocks
Apply: ● Apply It ● Write About It	**TE/SE pg. 260**
Wrap Up: ● Assign homework	**TE/SE pg. 261-262**
Learning Opportunities/Strategies: **Lesson 3 - Divide by a Two-Digit Divisor** **Objective:** Students will divide up to a three-digit number by a two-digit divisor.	**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 divide by a two-digit divisor?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 263A-B** ● Review Vocabulary: remainder
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 263B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how estimation is used to help you place the first digit in the quotient." ● Independent Practice	**TE/SE pg. 263-265** ● Assign On Level set: 2-12 (even), 14-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 266**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 267-268** ● Ticket Out the Door TE pg. 268 ● SE pg. 267-268
Learning Opportunities/Strategies: **Lesson 4 - Adjust Quotients**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will adjust the quotient when the estimated digit is too high or too low.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to divide by a two-digit divisor?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 271A-B** ● Review Vocabulary: estimate, quotient
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 271B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how you know when a digit you try in the quotient is too small." ● Independent Practice	**TE/SE pg. 271-273** ● Assign On Level set: 2-12 (even), 14-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 274**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 275-276** ● Quick Write TE pg. 276 ● SE pg. 275-276
Learning Opportunities/Strategies: **Lesson 5 - Divide Greater Numbers**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will divide greater numbers by multi-digit divisors.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can I use to divide by a two-digit divisor?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 277A-B** ● Review Vocabulary: dividend
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 277B**
Practice:	**TE/SE pg. 277-279**

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• Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Explain how estimation can be used before, during, and after a division problem.” • Independent Practice	• Assign On Level set: 2-12 (even), 14-18
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 280**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 281-282** • Ticket Out the Door TE pg. 282 • SE pg. 281-282
Learning Opportunities/Strategies: **Lesson 6 - Problem-Solving Investigation - Strategy: Solve a Simpler Problem** **Objective:** Students will solve problems by solving a simpler problem.	**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 divide by a two-digit divisor?” • Problem of the Day	**TE pg. 283A-B**
Build: • Prepare • Learn the Strategy	• TE pg. 283B • TE/SE pg. 283
Practice: • Practice the Strategy	**TE/SE pg. 284**
Apply: • Apply the Strategy • Review the Strategy	**TE/SE pg. 285-286** • Assign On Level set: 2-10 (even)
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 287-288** • Ticket Out the Door TE pg. 288 • SE pg. 287-288
Learning Opportunities/Strategies: **Chapter 4 - 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: "What strategies can I use to divide by a two-digit divisor?" **Review:** ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders **Reflect:** **Assign homework:**	**Student Homework Page** **TE/SE pg. 291-293** **TE/SE pg. 294** **Fluency Practice TE/SE pg. 289-290**

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	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	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	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

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	● 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	● 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 5: Add and Subtract Decimals

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NBT.4 -** Use place value understanding to round decimals to any place.
- **5.NBT.7 -** Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

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:	**Essential/Guiding Question:**
Students will… ● use place value to round numbers. ● use models to add decimals. ● add decimals. ● use properties of addition to add decimals. ● use models to subtract decimals.	● How can I use place value and properties to add and subtract decimals?
Content: ● Round Decimals ● Estimate Sums and Differences ● Problem-Solving Investigation: Estimate or Exact Answer ● Hands On: Add Decimals Using Base-Ten Blocks ● Hands On: Add Decimals Using Models ● Add Decimals ● Addition Properties ● Hands On: Subtract Decimals Using Base-Ten Blocks ● Hands On: Subtract Decimals Using Models ● Subtract Decimals	**Skills (Objectives):** ● Round decimals. ● Estimate sums and differences by rounding. ● Solve problems by using an estimate or an exact answer. ● Explore adding decimals using base-ten blocks. ● Explore adding decimals using models. ● Add decimals. ● Use the Associative, Commutative, and Identity Properties to add whole numbers and decimals mentally. ● Explore subtracting decimals using base-ten blocks. ● Explore subtracting decimals using models. ● Subtract decimals.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

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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.

NJSLS for Career Readiness, Life Literacies, and Key Skills

- **9.1.5.CR.1**: Compare various ways to give back and relate them to your strengths, interests, and other personal factors.
- **9.1.5.EG.1**: Explain and give examples of what is meant by the term “tax.”
- **9.1.5.FP.2**: Identify the elements of being a good steward of money.
- **9.1.5.FP.4**: Explain the role of spending money and how it affects well-being and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.)
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes
- **9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one’s thinking about a topic of curiosity.
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.
- **9.4.5.IML.1**: Evaluate digital sources for accuracy, perspective, credibility and relevance (e.g., Social Studies Practice - Gathering and Evaluating Sources).
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue.
- **9.4.5.IML.3**: Represent the same data in multiple visual formats in order to tell a story about the data.
- **9.4.5.IML.7**: Evaluate the degree to which information meets a need including social emotional learning, academic, and social.
- **9.4.5.TL.3**: Format a document using a word processing application to enhance text, change page formatting, and include appropriate images, graphics, or symbols.
- **9.4.5.TL.4**: Compare and contrast artifacts produced individually to those developed collaboratively.
- **9.4.5.TL.5**: Collaborate digitally to produce an artifact.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Quick Draw
- Debriefing
- Self-Assessment
- Ticket Out the Door
- Send a Problem
- Modeling
- Think-Pair-Share
- Quick Write
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:

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

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.

Resources:

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Chapter Introduction: ● Introduce the chapter by discussing the theme, "Let's Explore Technology!" ● View online video to spark a discussion about how math is used in technology. ● Introduce the Essential Question: "How can I use place value and properties to add and subtract decimals?"	**TE pg. 295** ● TE/SE pg. 295 ● Online Video ● TE/SE pg. 295
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. 297**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 298** ● Review Vocabulary: greater than (>), less than (<), equal to (=)
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 299-300** ● New Vocabulary: Associative Property of Addition, Commutative Property of Addition, Identity Property of Addition, inverse operations
My Foldable ● This foldable will provide practice adding decimals to the hundredths place value. Complete the "My Foldable" activities.	**TE/SE pg. 301-302**
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 - Round Decimals** **Objective:** Students will round decimals.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Launch: ● Remind students of the Essential Question: "How can I use place value and properties to add and subtract decimals?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 303A-B** ● Review Vocabulary: decimal, round
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 303B**
Practice: ● Math in My World ● Guided Practice ● Talk Math	**TE/SE pg. 303-305** ● place-value chart ● number line

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○ Students turn and talk: "Explain how to round 74.685 to the nearest hundredth." ● Independent Practice	● Assign On Level set: 2-12 (even), 14-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 306**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 307-308** ● Debriefing TE pg. 308 ● SE pg. 307-308
Learning Opportunities/Strategies: **Lesson 2 - Estimate Sums and Differences** **Objective:** Students will estimate sums and differences 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 use place value and properties to add and subtract decimals?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 309A-B** ● Review Vocabulary: sum, difference, round
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 309B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Describe a real-world example of when it might be appropriate to estimate rather than get the exact answer." ● Independent Practice	**TE/SE pg. 309-311** ● Assign On Level set: 4-14 (even), 15-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 312**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 313-314** ● Ticket Out the Door TE pg. 314 ● SE pg. 313-314
Learning Opportunities/Strategies: **Lesson 3 - Problem-Solving Investigation - Strategy: Estimate or Exact Answer**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will solve problems by using an estimate or an exact answer.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I use place value and properties to add and subtract decimals?" ● Problem of the Day	**TE pg. 315A-B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 315B ● TE/SE pg. 315
Practice: ● Practice the Strategy	**TE/SE pg. 316**
Apply: ● Apply the Strategy ● Review the Strategy	**TE/SE pg. 317-318** ● Assign On Level set: 2-10 (even)
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 319-320** ● Ticket Out the Door TE pg. 320 ● SE pg. 319-320
Learning Opportunities/Strategies: **Lesson 4 - Hands On - Add Decimals Using Base-Ten Blocks**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will explore adding decimals using base-ten blocks.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I use place value and properties to add and subtract decimals?" ● Problem of the Day	**TE pg. 323A**
Build: ● Build It	**TE/SE pg. 323** ● base-ten blocks
Practice: ● Talk About It ● Practice It	**TE/SE pg. 324-325** ● base-ten blocks ● base-ten blocks
Apply: ● Apply It ● Write About It	**TE/SE pg. 326**

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Wrap Up: ● Assign homework	**TE/SE pg. 327-328**
Learning Opportunities/Strategies: **Lesson 5 - Hands On - Add Decimals Using Models** **Objective:** Students will explore adding decimals using models.	**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 place value and properties to add and subtract decimals?" ● Problem of the Day	**TE pg. 329A**
Build: ● Build It	**TE/SE pg. 329** ● 10-by-10 grids
Practice: ● Talk About It ● Practice It	**TE/SE pg. 330-331** ● 10-by-10 grids ● 10-by-10 grids
Apply: ● Apply It ● Write About It	**TE/SE pg. 332** ● 10-by-10 grids
Wrap Up: ● Assign homework	**TE/SE pg. 333-334**
Learning Opportunities/Strategies: **Lesson 6 - Add Decimals** **Objective:** Students will add decimals.	**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 place value and properties to add and subtract decimals?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 335A-B** ● Review Vocabulary: place value
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 335B**
Practice: ● Math in My World	**TE/SE pg. 335-337**

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• Guided Practice • Talk Math ○ Students turn and talk: “Explain how annexing zeros might be helpful when adding decimals.” • Independent Practice	• Assign On Level set: 4-14 (even), 15-20
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 338**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 339-340** • Ticket Out the Door TE pg. 340 • SE pg. 339-340
Learning Opportunities/Strategies: **Lesson 7 - Addition Properties** **Objective:** Students will use the Associative, Commutative, and Identity Properties to add whole numbers and decimals mentally.	**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 place value and properties to add and subtract decimals?” • Developing Vocabulary • Problem of the Day	**TE pg. 341A-B** • New Vocabulary: Associative Property of Addition, Commutative Property of Addition, Identity Property of Addition
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 341B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Use properties to mentally determine whether 3.1 + 0.8 + 0.9 is less than, greater than, or equal to 5. Explain” • Independent Practice	**TE/SE pg. 341-343** • Assign On Level set: 2, 4, 5-10
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 344**
Wrap Up: • Complete formative assessment	**TE/SE pg. 345-346** • Self Assessment TE pg. 346

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• Assign homework	• SE pg. 345-346
Learning Opportunities/Strategies: **Lesson 8 - Hands On - Subtract Decimals Using Base-Ten Blocks** **Objective:** Students will explore subtracting decimals using base-ten blocks.	**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 place value and properties to add and subtract decimals?" • Problem of the Day	**TE pg. 349A**
Build: • Build It	**TE/SE pg. 349** • base-ten blocks
Practice: • Talk About It • Practice It	**TE/SE pg. 350-351** • base-ten blocks • base-ten blocks
Apply: • Apply It • Write About It	**TE/SE pg. 352** • base-ten blocks • base-ten blocks
Wrap Up: • Assign homework	**TE/SE pg. 353-354**
Learning Opportunities/Strategies: **Lesson 9 - Hands On - Subtract Decimals Using Models** **Objective:** Students will explore subtracting decimals using models.	**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 place value and properties to add and subtract decimals?" • Problem of the Day	**TE pg. 355A**
Build: • Build It	**TE/SE pg. 355** • 10-by-10 grids
Practice: • Talk About It	**TE/SE pg. 356-357** • 10-by-10 grids

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• Practice It **Apply:** • Apply It • Write About It **Wrap Up:** • Assign homework	• 10-by-10 grids **TE/SE pg. 358** • 10-by-10 grids **TE/SE pg. 359-360**
Learning Opportunities/Strategies: **Lesson 10 - Subtract Decimals** **Objective:** Students will subtract decimals. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How can I use place value and properties to add and subtract decimals?" • 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 estimation can be used before, during, and after a division problem." • 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. 361A-B** • New Vocabulary: inverse operation **TE pg. 361B** **TE/SE pg. 361-363** • Assign On Level set: 4-14 (even), 15-19 **TE/SE pg. 364** **TE/SE pg. 365-366** • Quick Write TE pg. 366 • SE pg. 365-366
Learning Opportunities/Strategies: **Chapter 5 - Review and Reflect** **Objective:** Assess students' understanding of the vocabulary and key concepts in this chapter. **Review Homework:** Review homework problems as needed.	**Resources:** **Student Homework Page**

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Essential Question: ● Remind students of the Essential Question: “How can I use place value and properties to add and subtract decimals?”	
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 367-369**
Reflect:	**TE/SE pg. 370**
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 ● 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	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	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

	animations to demonstrate a model/sample ● Utilize the McGraw Hill English Language Learner Guide to provide	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	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 6: Multiply and Divide Decimals

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NBT.2 -** Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
- **5.NBT.5 -** With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.
- **5.NBT.6 -** Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.
- **5.NBT.7 -** Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

NJSLS Standards 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.

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- **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 models to multiply decimals.
- multiply decimals.
- use properties of multiplication to multiply whole numbers and decimals.
- estimate quotients involving decimals
- divide a decimal by a whole number.

Essential/Guiding Question:

- How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?

Content:

- Estimate Products of Whole Numbers and Decimals
- Hands On: Use Models to Multiply
- Multiply Decimals by Whole Numbers
- Hands On: Use Models to Multiply Decimals
- Multiply Decimals
- Multiply Decimals by Powers of Ten
- Problem-Solving Investigation: Look for a Pattern
- Multiplication Properties
- Estimate Quotients
- Hands On: Divide Decimals
- Divide Decimals by Whole Numbers
- Hands On: Use Models to Divide Decimals
- Divide Decimals
- Divide Decimals by Powers of Ten

Skills (Objectives):

- Estimate products of whole numbers.
- Explore multiplying decimals by whole numbers.
- Multiply decimals by whole numbers.
- Explore using decimal models to multiply decimals.
- Multiply decimals by decimals.
- Multiply decimals by powers of ten.
- Solve problems by looking for a pattern.
- Use the Associative, Commutative, and Identity Properties to multiply mentally.
- Estimate quotients of decimals and whole numbers.
- Explore dividing decimals by whole numbers.
- Divide decimals by whole numbers.
- Explore using models to divide decimals by decimals.
- Divide decimals by decimals.
- Divide decimals by powers of ten.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

NJSLS for Social Studies

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- **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.2**: Identify the elements of being a good steward of money.
- **9.1.5.PB.1**: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.
- **9.1.5.PB.2**: Describe choices consumers have with money (e.g., save, spend, donate).
- **9.2.5.CAP.2**: Identify how you might like to earn an income.
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue
- **9.4.5.TL.3**: Format a document using a word processing application to enhance text, change page formatting, and include appropriate images, graphics, or symbols.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Vocabulary
- Ticket Out the Door
- Analogy Prompt
- Debriefing
- Think-Pair-Share
- Sequence
- Summarize
- Self-Assessment
- Quick Write
- Written Reflections
- Response Boards
- Send a Problem
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:

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

Benchmark Assessment:

- Benchmark Test 2 (covers chapters 4-6)

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, "My Summer Fun". ● View online video to spark a discussion about how math is used in summer fun. ● Introduce the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?"	**TE pg. 371** ● TE/SE pg. 371 ● Online Video ● TE/SE pg. 371
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. 373**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 374** ● Review Vocabulary: composite number, divide, hundredths, ones, power, thousands, decimal point, estimate, multiply, place value, tenths
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 375-376** ● New Vocabulary: Associative Property of Multiplication, Commutative Property of Multiplication, Identity Property of Multiplication
My Foldable ● This foldable will aid in understanding powers of 10 and seeing the patterns in the products. Complete the "My Foldable" activities.	**TE/SE pg. 377-378**
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 - Estimate Products of Whole Numbers and Decimals** **Objective:** Students will estimate products of whole numbers and decimals.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 379A-B** ● Review Vocabulary: decimal, estimate, place value
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 379B**
Practice:	**TE/SE pg. 379-381**

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• Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Explain how to round 18.9 to the nearest whole number.” • Independent Practice	• Assign On Level set: 6-14 (even), 15-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 382**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 383-384** • Ticket Out the Door TE pg. 384 • SE pg. 383-384
Learning Opportunities/Strategies: **Lesson 2 - Hands On - Use Models to Multiply** **Objective:** Students will explore multiplying decimals by 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 is multiplying and dividing decimals similar to multiplying and dividing whole numbers?” • Problem of the Day	**TE pg. 385A**
Build: • Build It	**TE/SE pg. 385** • 10-by-10 grids
Practice: • Talk About It • Practice It	**TE/SE pg. 386-387** • 10-by-10 grids • 10-by-10 grids
Apply: • Apply It • Write About It	**TE/SE pg. 388**
Wrap Up: • Assign homework	**TE/SE pg. 389-390**
Learning Opportunities/Strategies: **Lesson 3 - Multiply Decimals by Whole Numbers** **Objective:** Students will multiply decimals by whole numbers.	**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 is multiplying and dividing decimals similar to multiplying and dividing whole numbers?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 391A-B** ● Review Vocabulary: multiply, factor
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 391B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Is the product of 2.8 and 2 greater than 6 or less than 6? How do you know?” ● Independent Practice	**TE/SE pg. 391-393** ● Assign On Level set: 6-16 (even), 18-22
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 394**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 395-396** ● Debriefing TE pg. 396 ● SE pg. 395-396
Learning Opportunities/Strategies: **Lesson 4 - Hands On - Use Models to Multiply Decimals** **Objective:** Students will explore using decimals to multiply decimals.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?” ● Problem of the Day	**TE pg. 397A**
Build: ● Build It	**TE/SE pg. 397** ● 10-by-10 grids
Practice: ● Talk About It ● Practice It	**TE/SE pg. 398-399** ● 10-by-10 grids ● 10-by-10 grids
Apply: ● Apply It ● Write About It	**TE/SE pg. 400**

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Wrap Up: ● Assign homework	**TE/SE pg. 401-402**
Learning Opportunities/Strategies: **Lesson 5 - Multiply Decimals**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will multiply decimals by decimals.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 403A-B** ● Review Vocabulary: multiply, decimal
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 403B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Describe a multiplication problem in which the product is between 0.005 and 1." ● Independent Practice	**TE/SE pg. 403-405** ● Assign On Level set: 4-14 (even), 16-21
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 406**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 407-408** ● Sequence TE pg. 408 ● SE pg. 407-408
Learning Opportunities/Strategies: **Lesson 6 - Multiply Decimals by Powers of Ten**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will multiply decimals by powers of ten.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Developing Vocabulary	**TE pg. 411A-B**

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• Problem of the Day	• Review Vocabulary: powers of 10
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 411B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how you can mentally find the cost of 10 text messages that each cost $0.25." • Independent Practice	**TE/SE pg. 411-413** • Assign On Level set: 12, 14, 16-21
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 414**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 415-416** • Self-Assessment TE pg. 416 • SE pg. 415-416
Learning Opportunities/Strategies: **Lesson 7 - Problem-Solving Investigation - Strategy: Look for a Pattern** **Objective:** Students will solve problems by looking for a 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 is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" • Problem of the Day	**TE pg. 417A-B**
Build: • Prepare • Learn the Strategy	• TE pg. 417B • TE/SE pg. 417
Practice: • Practice the Strategy	**TE/SE pg. 418**
Apply: • Apply the Strategy • Review the Strategy	**TE/SE pg. 419-420** • Assign On Level set: 2-10 (even)
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 421-422** • Ticket Out the Door TE pg. 421 • SE pg. 421-422

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Learning Opportunities/Strategies:	Resources:
Lesson 8 - Multiplication Properties	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will use the Associative, Commutative, and Identity Properties to multiply mentally.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Developing Vocabulary	**TE pg. 423A-B** ● New Vocabulary: Associative Property of Multiplication, Commutative Property of Multiplication, Identity Property of Multiplication
● Problem of the Day	
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 423B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how estimation can be used before, during, and after a division problem." ● Independent Practice	**TE/SE pg. 423-425** ● Assign On Level set: 4-10 (even), 12-16
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 426**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 427-428** ● Ticket Out the Door TE pg. 428 ● SE pg. 427-428
Learning Opportunities/Strategies:	**Resources:**
Lesson 9 - Estimate Quotients	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will estimate quotients of decimals and whole numbers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?"	**TE pg. 429A-B**

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• Developing Vocabulary • Problem of the Day	• Review Vocabulary: estimate, quotient
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 429B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Describe another way you could estimate in Example 2. Are both estimates reasonable? Explain." • Independent Practice	**TE/SE pg. 429-431** • Assign On Level set: 4-12 (even), 14-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 432**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 433-434** • Ticket Out the Door TE pg. 434 • SE pg. 433-434
Learning Opportunities/Strategies: **Lesson 10 - Hands On - Divide Decimals** **Objective:** Students will explore dividing decimals by 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 is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" • Problem of the Day	**TE pg. 437A**
Build: • Build It	**TE/SE pg. 437** • base-ten blocks
Practice: • Talk About It • Practice It	**TE/SE pg. 438-439** • base-ten blocks • base-ten blocks
Apply: • Apply It • Write About It	**TE/SE pg. 440** • base-ten blocks
Wrap Up: • Assign homework	**TE/SE pg. 441-442**

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Learning Opportunities/Strategies:	Resources:
Lesson 11 - Divide Decimals by Whole Numbers	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will divide decimals by whole numbers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 443A-B** ● Review Vocabulary: divide
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 443B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Is the quotient 9.3 ÷ 15 greater than one or less than one? Explain without calculating." ● Independent Practice	**TE/SE pg. 443-445** ● Assign On Level set: 4-14 (even), 15-20
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 446**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 447-448** ● Sequence TE pg. 448 ● SE pg. 447-448
Learning Opportunities/Strategies:	**Resources:**
Lesson 12 - Hands On - Use Models to Divide Decimals	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will explore dividing decimals by whole numbers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Problem of the Day	**TE pg. 449A**

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Build: ● Build It	**TE/SE pg. 449** ● base-ten blocks
Practice: ● Talk About It ● Practice It	**TE/SE pg. 450-451** ● base-ten blocks ● base-ten blocks
Apply: ● Apply It ● Write About It	**TE/SE pg. 452** ● base-ten blocks
Wrap Up: ● Assign homework	**TE/SE pg. 453-454**
Learning Opportunities/Strategies: **Lesson 13 - Divide Decimals** **Objective:** Students will divide decimals by decimals.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 455A-B** ● Review Vocabulary: divisor, dividend
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 455B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "When finding 0.808 ÷ 0.4, by what number should you multiply the divisor? Explain." ● Independent Practice	**TE/SE pg. 455-457** ● Assign On Level set: 4-14 (even), 15-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 458**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 459-460** ● Sequence TE pg. 460 ● SE pg. 459-460
Learning Opportunities/Strategies: **Lesson 14 - Divide Decimals by Powers of Ten** **Objective:** Students will divide decimals by powers of ten.	**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 is multiplying and dividing decimals similar to multiplying and dividing whole numbers?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 461A-B** ● Review Vocabulary: exponents
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 461B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Use the number of zeros in the number 10 to explain why 4.5 ÷ 10 = 0.45." ● Independent Practice	**TE/SE pg. 461-463** ● Assign On Level set: 4-12 (even), 14-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 464**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 465-466** ● Send a Problem TE pg. 466, index cards ● SE pg. 465-466
Learning Opportunities/Strategies: **Chapter 6 - 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 is multiplying and dividing decimals similar to multiplying and dividing whole numbers?"	
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 467-469**
Reflect:	**TE/SE pg. 470**

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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 ● 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

		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 7: Expressions and Patterns

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.OA.1 -** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
- **5.OA.2 -** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation “add 8 and 7, then multiply by 2” as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.
- **5.OA.3 -** Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.
- **5.NBT.7 -** Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
- **5.G.1 -** Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).
- **5.G.2 -** Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
- **5.DL.1 -** Understand how different visualizations can highlight different aspects of data. Ask questions and interpret data visualizations to describe and analyze patterns.
- **5.DL.4-**Using appropriate visualizations (i.e. double line plot, double bar graph), analyze data across samples.

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.

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- **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 the order of operations to simplify expressions.
- write verbal phrases as mathematical expressions.
- use addition and subtraction to describe and extend a number pattern.
- name ordered pairs for points on a coordinate plane.
- compare numerical patterns graphically.

Essential/Guiding Question:

- How are patterns used to solve problems?

Content:

- Hands On: Numerical Expressions
- Order of Operations
- Write Numerical Expressions
- Problem-Solving Investigation: Work Backward
- Hands On: Generate Patterns
- Patterns
- Hands On: Map Locations
- Ordered Pairs
- Graph Patterns

Skills (Objectives):

- Write and evaluate numerical expressions.
- Use the order of operations to evaluate expressions.
- Explore using decimal models to multiply decimals.
- Multiply decimals by decimals.
- Identify and extend patterns and sequences.
- Plot points on a grid to solve real-world problems.
- Graph points on a coordinate plane to solve real-world and mathematical problems.
- Graph ordered pairs on a coordinate plane to solve problems involving two numerical patterns.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

- **9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.2**: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem.
- **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.
- **9.4.5.IML.1**: Evaluate digital sources for accuracy, perspective, credibility and relevance (e.g., Social Studies Practice - Gathering and Evaluating Sources).
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue.
- **9.4.5.IML.3**: Represent the same data in multiple visual formats in order to tell a story about the data.
- **9.4.5.IML.6**: Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions.
- **9.4.5.IML.7**: Evaluate the degree to which information meets a need including social emotional learning, academic, and social.
- **9.4.5.TL.3**: Format a document using a word processing application to enhance text, change page formatting, and include appropriate images, graphics, or symbols.
- **9.4.5.TL.4**: Compare and contrast artifacts produced individually to those developed collaboratively.
- **9.4.5.TL.5**: Collaborate digitally to produce an artifact.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Sequence
- Quick Write
- Ticket Out the Door
- Turn to Your Partner
- Written Reflections
- Quick Check
- Send a Problem
- Self-Assessment
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:

- My Review
- Reflect
- Chapter 7 - Assessment
- Chapter 7 - Performance Task

Benchmark Assessment:

- n/a

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, "Fun with My Friends". ● View online video to spark a discussion about how math is used in fun with their friends. ● Introduce the Essential Question: "How are patterns used to solve problems?"	**TE pg. 471** ● TE/SE pg. 471 ● Online Video ● TE/SE pg. 471
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. 473**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 474** ● Review Vocabulary: perpendicular
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 475-478** ● New Vocabulary: coordinate plane, evaluate, numerical expression, ordered pair, order of operations, origin, sequence, term
My Foldable ● This foldable will aid in problem solving by applying the order of operations. Complete the "My Foldable" activities.	**TE/SE pg. 479-480**
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 - Numerical Expressions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will write and evaluate numerical expressions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are patterns used to solve problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 481A** ● New Vocabulary: evaluate, numerical expression
Build:	**TE/SE pg. 481**

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• Build It **Practice:** • Talk About It • Practice It **Apply:** • Apply It • Write About It **Wrap Up:** • Assign homework	• bar diagram **TE/SE pg. 482-483** • bar diagram • bar diagram **TE/SE pg. 484** **TE/SE pg. 485-486**
Learning Opportunities/Strategies: **Lesson 2 - Order of Operations** **Objective:** Students will use the order of operations to evaluate expressions. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How are patterns used to solve problems?" • 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 why it is important to follow the order of operations when evaluating 15 + 3 x 4." • 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. 487A-B** • New Vocabulary: order of operations **TE pg. 487B** **TE/SE pg. 487-489** • Assign On Level set: 2-10 (even), 12-16 **TE/SE pg. 490** **TE pg. 491-492** • Quick Write TE pg. 492 • SE pg. 491-492
Learning Opportunities/Strategies: **Lesson 3 - Write Numerical Expressions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will use numbers and operation symbols to write verbal phrases as numerical expressions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are patterns used to solve problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 493A-B** ● Review Vocabulary: numerical expressions, order of operations
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 493B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Write a real-world problem that could be represented by a numerical expression." ● Independent Practice	**TE/SE pg. 493-495** ● Assign On Level set: 2-6 (even), 7-11
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 496**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 497-498** ● Turn to Your Partner TE pg. 498 ● SE pg. 497-498
Learning Opportunities/Strategies: **Lesson 4 - Problem-Solving Investigation - Strategy: Work Backward**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will solve problems by working backwards.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are patterns used to solve problems?" ● Problem of the Day	**TE pg. 499A-B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 499B ● TE/SE pg. 499

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Practice: ● Practice the Strategy	**TE/SE pg. 500**
Apply: ● Apply the Strategy ● Review the Strategy	**TE/SE pg. 501-502**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 503-504** ● Ticket Out the Door TE pg. 504 ● SE pg. 503-504
Learning Opportunities/Strategies: **Lesson 5 - Hands On - Generate Patterns** **Objective:** Students will generate numerical patterns and identify pattern relationships.	**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 to solve problems?" ● Problem of the Day	**TE pg. 507A**
Build: ● Build It	**TE/SE pg. 507** ● toothpicks
Practice: ● Talk About It ● Practice It	**TE/SE pg. 508-509** ● toothpicks ● toothpicks
Apply: ● Apply It ● Write About It	**TE/SE pg. 510** ● toothpicks
Wrap Up: ● Assign homework	**TE/SE pg. 511-512**
Learning Opportunities/Strategies: **Lesson 6 - Patterns** **Objective:** Students identify and extend patterns and sequence.	**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 to solve problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 513A-B** ● New Vocabulary: sequence, term

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Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 513B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “How are the sequences 2, 5, 8, 11, … and 2, 6, 18, 54, … alike? How are they different?” ● Independent Practice	**TE/SE pg. 513-515** ● Assign On Level set: 2-12 (even), 14-16
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 516**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 517-518** ● Send a Problem TE pg. 518 ● SE pg. 517-518
Learning Opportunities/Strategies: **Lesson 7 - Hands On - Map Locations** **Objective:** Students will plot points on a grid to solve real-world 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 patterns used to solve problems?” ● Problem of the Day	**TE pg. 519A**
Build: ● Build It	**TE/SE pg. 519** ● grid paper
Practice: ● Talk About It ● Practice It	**TE/SE pg. 520-521**
Apply: ● Apply It ● Write About It	**TE/SE pg. 522**
Wrap Up: ● Assign homework	**TE/SE pg. 523-524**
Learning Opportunities/Strategies: **Lesson 8 - Ordered Pairs**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will graph points on a coordinate plane to solve real-world and mathematical problems.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are patterns used to solve problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 525A-B** ● New Vocabulary: coordinate plane, ordered pair, origin, x-coordinate, y-coordinate
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 525B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Are the points at (3, 8) and (8, 3) in the same location? Explain your reasoning." ● Independent Practice	**TE/SE pg. 525-527** ● Assign On Level set: 4-14 (even), 15-22
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 528**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 529-530** ● Ticket Out the Door TE pg. 530 ● SE pg. 529-530
Learning Opportunities/Strategies: **Lesson 9 - Graph Patterns**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will graph ordered pairs on a coordinate plane to solve problems involving two numerical patterns.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How are patterns used to solve problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 531A-B** ● Review Vocabulary: pattern
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 531B**
Practice:	**TE/SE pg. 531-533**

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● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Explain how you would graph two real-world patterns using ordered pairs.” ● Independent Practice	● Assign On Level set: 2-6
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 534**
Climate Change Opportunity: ● Students will represent a real world problem about the deer population by graphing points in the first quadrant of the coordinate plane. Students may interpret coordinate values of points in the context of climate change.	**Climate Change Example**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 535-536** ● Quick Write TE pg. 536 ● SE pg. 535-536
Learning Opportunities/Strategies: **Chapter 7 - 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 patterns used to solve problems?”	**Resources:** **Student Homework Page**
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 537-539**
Reflect:	**TE/SE pg. 540**
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	Small Group ● Utilize gradual release model	Small Group ● Specific use of modalities -	Small Group ● Specific use of modalities -

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● 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	● 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	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	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 8: Fractions and Decimals

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NBT.5 -** With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.
- **5.NF.2 -** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.
- **5.NF.3 -** Interpret a fraction as division of the numerator by the denominator (i.e. a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?
- **5.NF.5b -** Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1.

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 a fraction to represent division. • use models to represent division. • write a fraction in the simplest form. • compare fractions with unlike denominators. • use models to write a fraction as a decimal.	• How are factors and multiples helpful in solving problems?
Content: • Fractions and Division • Greatest Common Factor • Simplest Form	**Skills (Objectives):** • Solve word problems by interpreting a fraction as division of the numerator by the denominator.

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• Problem-Solving Investigation: Guess, Check, and Revise • Least Common Multiple • Compare Fractions • Hands On: Use Models to Write Fractions as Decimals • Write Fractions as Decimals	• Determine the common factors and the greatest common factor of a set of numbers. • Generate equivalent fractions by writing a fraction in simplest form. • Guess, check, and revise to solve problems. • Determine the common multiples and the least common multiple of a set of numbers. • Compare fractions by using the least common denominator. • Explore how to use models and fraction equivalence to write fractions as decimals. • Use fraction equivalence to write fractions as decimals.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.

Stage 2: Assessment Evidence

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

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Formative Assessments: ● Quick Write ● Ticket Out the Door ● Summarize ● Turn to Your Partner ● Self-Assessment ● Analogy Prompt ● Directed Paraphrasing ● Talk Math ● Independent Practice ● Check My Progress	● Chapter 8 - Assessment ● Chapter 8 - Performance Task **Benchmark Assessment:** ● n/a

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 and Sports!" ● View online video to spark a discussion about how math is used in games and sports. ● Introduce the Essential Question: "How are factors and multiples helpful in solving problems?"	**TE pg. 541** ● TE/SE pg. 541 ● Online Video ● TE/SE pg. 541
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. 543**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 544** ● Review Vocabulary: decimal, equivalent decimals, multiples, prime factorization
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 545-548** ● New Vocabulary: common factor, common multiple, denominator, equivalent fractions, fraction, greatest common factor (GCF), least common denominator (LCD), least common multiple (LCM)
My Foldable ● Use this foldable to write fractions as decimals. Complete the "My Foldable" activities.	**TE/SE pg. 549-550**
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 - Fractions and Division **Objective:** Students will solve word problems by interpreting a fraction as division of the numerator by the denominator.	**Follow corresponding Lesson Presentation Slides.**
Launch: ● Remind students of the Essential Question: "How are factors and multiples helpful in solving problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 551A-B** ● New Vocabulary: denominator, fraction, numerator
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 551B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Give an example of how a fraction represents a division situation in real life." ● Independent Practice	**TE/SE pg. 551-553** ● Assign On Level set: 2, 4-9
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 554**
Climate Change Opportunity: ● Students will examine the impact climate change has on agriculture. Students may solve word problems about the distribution of rice that involve the division of whole numbers and lead to answers in the form of fractions.	**Climate Change Example:** ● Ten years ago, a local farm sold 30 pounds of rice each season. The farm equally divided the rice into 12 large storage containers. How many pounds of rice does each container hold? ● Due to climate change, the local farmer now can only sell 20 pounds of rice each season. If the farm still splits the rice into 12 storage containers, how many pounds of rice does each container hold now?
Wrap Up: ● Complete formative assessment ● Assign homework	● Ticket Out the Door TE pg. 556 ● SE pg. 554-556
Learning Opportunities/Strategies: **Lesson 2 - Greatest Common Factor**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will determine the common factors and the greatest common factor of a set of numbers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 557A-B**

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• Remind students of the Essential Question: “How are factors and multiples helpful in solving problems?” • Developing Vocabulary • Problem of the Day	• New Vocabulary: common factors, greatest common factor (GCF)
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 557B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Explain which method you prefer to find the GCF of two numbers.” • Independent Practice	**TE/SE pg. 557-559** • Assign On Level set: 4-10 (even), 11-15
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 560**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 561-562** • Ticket Out the Door TE pg. 562 • SE pg. 561-562
Learning Opportunities/Strategies: **Lesson 3 - Simplest Form** **Objective:** Students will generate equivalent fractions by writing a fraction in simplest form.	**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 factors and multiples helpful in solving problems?” • Developing Vocabulary • Problem of the Day	**TE pg. 563A-B** • New Vocabulary: equivalent fractions, simplest form
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 563B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Explain how to find the simplest form of any fraction.”	**TE/SE pg. 563-565**

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• Independent Practice	• Assign On Level set: 4-14 (even), 15-18
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 566**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 567-568** • Turn to Your Partner TE pg. 568 • SE pg. 567-568
Learning Opportunities/Strategies: **Lesson 4 - Problem-Solving Investigation - Strategy: Guess, Check, and Revise** **Objective:** Students will guess, check, and revise 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 factors and multiples helpful in solving problems?" • Problem of the Day	**TE pg. 569A-B**
Build: • Prepare • Learn the Strategy	• TE pg. 569B • TE/SE pg. 569
Practice: • Practice the Strategy	**TE/SE pg. 570**
Apply: • Apply the Strategy • Review the Strategy	**TE/SE pg. 571-572**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 573-574** • Ticket Out the Door TE pg. 574 • SE pg. 573-574
Learning Opportunities/Strategies: **Lesson 5 - Least Common Multiple** **Objective:** Students will determine the common multiples and the least common multiple of a set of numbers.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 577A-B**

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• Remind students of the Essential Question: “How are factors and multiples helpful in solving problems?” • 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: “Could the LCM of two numbers be one of the numbers? Explain.” • Independent Practice **Apply:** • Problem Solving • Brain Builders **Wrap Up:** • Complete formative assessment • Assign homework	• New Vocabulary: common multiples, least common multiple (LCM), multiple **TE pg. 577B** **TE/SE pg. 577-579** • Assign On Level set: 4-14 (even), 15-19 **TE/SE pg. 580** **TE/SE pg. 581-582** • Summarize TE pg. 581 • SE pg. 581-582
Learning Opportunities/Strategies: **Lesson 6 - Compare Fractions** **Objective:** Students will compare fractions by using the least common denominator. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: “How are factors and multiples helpful in solving problems?” • 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. 583A-B** • New Vocabulary: least common denominator (LCD) **TE pg. 583B** **TE/SE pg. 583-585**

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○ Students turn and talk: “Explain how the LCM and the LCD are alike. How are they different?” ● Independent Practice	● Assign On Level set: 2-12 (even), 14-16
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 586**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 587-588** ● Quick Write TE pg. 588 ● SE pg. 587-588
Learning Opportunities/Strategies: **Lesson 7 - Hands On - Use Models to Write Fractions as Decimals** **Objective:** Students will explore how to use models and fraction equivalence to write fractions as decimals.	**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 factors and multiples helpful in solving problems?” ● Problem of the Day	**TE pg. 589A**
Build: ● Draw It	**TE/SE pg. 589** ● tenths and hundredths grid
Practice: ● Talk About It ● Practice It	**TE/SE pg. 590-591**
Apply: ● Apply It ● Write About It	**TE/SE pg. 592**
Wrap Up: ● Assign homework	**TE/SE pg. 593-594**
Learning Opportunities/Strategies: **Lesson 8 - Write Fractions as Decimals** **Objective:** Students will use fraction equivalence to write fractions as decimals.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 595A-B**

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• Remind students of the Essential Question: "How are factors and multiples helpful in solving problems?" • Developing Vocabulary • Problem of the Day	• Review Vocabulary: decimal, fraction
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 595B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how to write a fraction as a decimal using equivalent fractions." • Independent Practice	**TE/SE pg. 595-597** • Assign On Level set: 4-18 (even), 19-22
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 598**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 599-600** • Ticket Out the Door TE pg. 600 • SE pg. 599-600
Learning Opportunities/Strategies: **Chapter 8 - 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 are factors and multiples helpful in solving problems?"	
Review: • Vocabulary Check • Concept Check • Problem Solving • Brain Builders	**TE/SE pg. 601-603**
Reflect:	**TE/SE pg. 604**
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

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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 9: Add and Subtract Fractions

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NF.1 -** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)
- **5.NF.2 -** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.

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 fraction tiles to model the sum of fractions.
- add and subtract like fractions.
- add and subtract unlike fractions.
- estimate the sum and difference of mixed numbers.
- add and subtract mixed numbers.

Essential/Guiding Question:

- How can equivalent fractions help me add and subtract fractions?

Content:

- Round Fractions
- Add Like Fractions
- Subtract Like Fractions
- Hands On: Use Models to Add Unlike Fractions
- Add Unlike Fractions

Skills (Objectives):

- Use number lines and benchmark fractions, such as ½, to round fractions.
- Add like fractions and solve word problems involving the addition of like fractions.
- Subtract like fractions and solve word problems involving the subtraction of like fractions.

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• Hands On: Use Models to Subtract Unlike Fractions • Subtract Unlike Fractions • Problem-Solving Investigation: Determine Reasonable Answers • Estimate Sums and Differences • Hands On: Use Models to Add Mixed Numbers • Add Mixed Numbers • Subtract Mixed Numbers • Subtract with Renaming	• Use models to add unlike fractions. • Add unlike fractions and solve word problems involving the addition of unlike fractions. • Use models to subtract unlike fractions. • Subtract unlike fractions and solve word problems involving the subtraction of unlike fractions. • Solve problems by determining reasonable answers. • Use number sense and benchmark fractions to estimate sums and differences. • Explore adding mixed numbers using models. • Add mixed numbers and solve word problems involving the addition of mixed numbers. • Subtract mixed numbers and solve word problems involving the subtraction of mixed numbers. • Use fraction equivalence to subtract with renaming.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.

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- **9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
- **9.4.5.CI.4**: Research the development process of a product and identify the role of failure as a part of the creative process.
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.

Stage 2: Assessment Evidence

Diagnostic Assessment:
- Am I Ready?

Formative Assessments:
- Summarize
- Ticket Out the Door
- Quick Write
- Sequence
- Self-Assessment
- Modeling
- Send a Problem
- Think-Pair-Share
- Turn to Your Partner
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:
- My Review
- Reflect
- Chapter 9 - Assessment
- Chapter 9 - Performance Task

Benchmark Assessment:
- Benchmark Test 3 (covers chapters 7-9)

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, "Our Oceans". • View online video to spark a discussion about how math is used in ocean life. • Introduce the Essential Question: "How can equivalent fractions help me add and subtract fractions?"	**TE pg. 605** • TE/SE pg. 605 • Online Video • TE/SE pg. 605
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. 607**
My Math Words • Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 608** • Review Vocabulary: factors, greatest common factor (GCF), least common multiple (LCM), mixed numbers, multiples
My Vocabulary Cards	**TE/SE pg. 609-610**

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● Introduce vocabulary words and complete “My Vocabulary Cards” activity.	● New Vocabulary: like fractions, unlike fractions
My Foldable ● Use this foldable to add like and unlike fractions. Complete the “My Foldable” activities.	**TE/SE pg. 611-612**
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 - Round Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will use number lines and benchmark fractions, such as ½, to round fractions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: “How can equivalent fractions help me add and subtract fractions?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 613A-B** ● Review Vocabulary: benchmark fraction, number line, round
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 613B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Tell how to round fractions in your own words.” ● Independent Practice	**TE/SE pg. 613-615** ● Assign On Level set: 3-17 (odd), 18, 19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 616**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 617-618** ● Ticket Out the Door TE pg. 618, index card ● SE pg. 617-618
Learning Opportunities/Strategies: **Lesson 2 - Add Like Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will add like fractions and solve word problems involving the addition of like fractions.	

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Review Homework: Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How can equivalent fractions help me add and subtract 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 a real-world problem that can be solved by adding like fractions." ● Independent Practice **Apply:** ● Problem Solving ● Brain Builders **Wrap Up:** ● Complete formative assessment ● Assign homework **Learning Opportunities/Strategies:** **Lesson 3 - Subtract Like Fractions** **Objective:** Students will subtract like fractions and solve word problems involving the subtraction of like fractions. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How can equivalent fractions help me add and subtract fractions?" ● Developing Vocabulary ● Problem of the Day **Build:** ● Investigate the Math: Explore, Model, Extend **Practice:** ● Math in My World ● Guided Practice ● Talk Math	**Student Homework Page** **TE pg. 619A-B** ● New Vocabulary: like fractions **TE pg. 619B** **TE/SE pg. 619-621** ● fraction tiles ● Assign On Level set: 4-14 (even), 15-19 **TE/SE pg. 622** **TE pg. 623-624** ● Sequence TE pg. 624 ● SE pg. 623-624 **Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 625A-B** ● Review Vocabulary: like fractions **TE pg. 625B** **TE/SE pg. 625-627** ● fraction tiles ● fraction tiles

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○ Students turn and talk: “Tell about a real-world situation in which you would find ¾ - ¼.” ● Independent Practice	● Assign On Level set: 4-16 (even), 17-20
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 628**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 629-630** ● Sequence TE pg. 630 ● SE pg. 629-630
Learning Opportunities/Strategies: **Lesson 4 - Hands On - Use Models to Add Unlike Fractions** **Objective:** Students will use models to add unlike 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 equivalent fractions help me add and subtract fractions?” ● Problem of the Day	**TE pg. 631A**
Build: ● Build It	**TE/SE pg. 631** ● fraction tiles
Practice: ● Talk About It ● Practice It	**TE/SE pg. 632-633** ● fraction tiles ● fraction tiles
Apply: ● Apply It ● Write About It	**TE/SE pg. 634**
Wrap Up: ● Assign homework	**TE/SE pg. 635-636**
Learning Opportunities/Strategies: **Lesson 5 - Add Unlike Fractions** **Objective:** Students will add unlike fractions and solve word problems involving the addition of unlike fractions.	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 637A-B**

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● Remind students of the Essential Question: “How can equivalent fractions help me add and subtract fractions?” ● Developing Vocabulary ● Problem of the Day	● Review Vocabulary: unlike fractions
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 637B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “How can benchmark fractions and number sense be used to check answers for reasonableness?” ● Independent Practice	**TE/SE pg. 637-639** ● Assign On Level set: 4-14 (even), 15-19
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 640**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 641-642** ● Quick Write TE pg. 642 ● SE pg. 641-642
Learning Opportunities/Strategies: **Lesson 6 - Hands On - Use Models to Subtract Unlike Fractions** **Objective:** Students will use models to subtract unlike 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 equivalent fractions help me add and subtract fractions?” ● Problem of the Day	**TE pg. 645A**
Build: ● Build It	**TE/SE pg. 645** ● fraction tiles
Practice: ● Talk About It ● Practice It	**TE/SE pg. 646-647** ● fraction tiles ● fraction tiles
Apply: ● Apply It ● Write About It	**TE/SE pg. 648** ● fraction tiles

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Wrap Up: ● Assign homework	**TE/SE pg. 649-650**
Learning Opportunities/Strategies: **Lesson 7 - Subtract Unlike Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will subtract unlike fractions and solve word problems involving the subtraction of unlike fractions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can equivalent fractions help me add and subtract fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 651A-B** ● Review Vocabulary: least common denominator (LCD)
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 651B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Describe the steps you can use to find 3/4 - 1/12." ● Independent Practice	**TE/SE pg. 651-653** ● Assign On Level set: 2-14 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 654**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 655-656** ● Summarize TE pg. 656 ● SE pg. 655-656
Learning Opportunities/Strategies: **Lesson 8 - Problem-Solving Investigation - Strategy: Determine Reasonable Answers**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will solve problems by determining reasonable answers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 657A-B**

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• Remind students of the Essential Question: "How can equivalent fractions help me add and subtract fractions?" • Problem of the Day	
Build: • Prepare • Learn the Strategy	• TE pg. 657B • TE/SE pg. 657
Practice: • Practice the Strategy	**TE/SE pg. 658**
Apply: • Apply the Strategy • Review the Strategy	**TE/SE pg. 659-660**
Wrap Up: • Complete formative assessment • Assign homework	**TE pg. 661-662** • Ticket Out the Door TE pg. 662 • SE pg. 661-662
Learning Opportunities/Strategies: **Lesson 9 - Estimate Sums and Differences** **Objective:** Students will use number sense and benchmark fractions to estimate sums and differences.	**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 equivalent fractions help me add and subtract fractions?" • Developing Vocabulary • Problem of the Day	**TE pg. 663A-B** • Review Vocabulary: difference, estimate, fraction, sum
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 663B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "Explain how you would estimate 8 4/7 - 4 2/7." • Independent Practice	**TE/SE pg. 663-665** • Assign On Level set: 9-16 (even), 17-20
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 666**
Wrap Up:	**TE/SE pg. 667-668**

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• Complete formative assessment • Assign homework	• Think-Pair-Share TE pg. 668 • SE pg. 667-668
Learning Opportunities/Strategies: **Lesson 10 - Hands On - Use Models to Add Mixed Numbers** **Objective:** Students will explore adding mixed numbers using models.	**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 equivalent fractions help me add and subtract fractions?" • Problem of the Day	**TE pg. 671A**
Build: • Draw It	**TE/SE pg. 671** • fraction circles
Practice: • Talk About It • Practice It	**TE/SE pg. 672-673**
Apply: • Apply It • Write About It	**TE/SE pg. 674** • fraction circles
Wrap Up: • Assign homework	**TE/SE pg. 675-676**
Learning Opportunities/Strategies: **Lesson 11 - Add Mixed Numbers** **Objective:** Students will add mixed numbers and solve word problems involving the addition of 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 equivalent fractions help me add and subtract fractions?" • Developing Vocabulary • Problem of the Day	**TE pg. 677A-B** • Review Vocabulary: estimate, mixed numbers
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 677B**
Practice:	**TE/SE pg. 677-679**

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• Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Explain how to simplify 3 6/4.” • Independent Practice	• Assign On Level set: 2-14 (even), 15-18
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 680**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 681-682** • Ticket Out the Door TE pg. 681 • SE pg. 681-682
Learning Opportunities/Strategies: **Lesson 12 - Subtract Mixed Numbers** **Objective:** Students will subtract mixed numbers and solve word problems involving the subtraction of 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 equivalent fractions help me add and subtract fractions?” • Developing Vocabulary • Problem of the Day	**TE pg. 683A-B** • Review Vocabulary: mixed numbers
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 683B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: “Describe the steps you would take to find 3 ⅝ - 2 ⅜.” • Independent Practice	**TE/SE pg. 683-685** • fraction tiles • fraction tiles • Assign On Level set: 4-14 (even), 15-19
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 686**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 687-688** • Turn to Your Partner TE pg. 688 • SE pg. 687-688
Learning Opportunities/Strategies: **Lesson 13 - Subtract with Renaming**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will use fraction equivalence to subtract with renaming.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can equivalent fractions help me add and subtract fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 689A-B** ● Review Vocabulary: rename
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 689B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Describe the steps you would use to find 3 2/7 - 1 4/7." ● Independent Practice	**TE/SE pg. 689-691** ● fraction tiles ● Assign On Level set: 2-14 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 692**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 693-694** ● Ticket Out the Door TE pg. 694 ● SE pg. 693-694
Learning Opportunities/Strategies: **Chapter 9 - 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 equivalent fractions help me add and subtract fractions?"	
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 695-697**

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Reflect: **Assign homework:**	**TE/SE pg. 698** **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	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

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		• Utilize the McGraw Hill English Language Learner Guide to provide	• 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 10: Multiply and Divide Fractions

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.NF.4 -** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
- **5.NF.4a -** Interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)
- **5.NF.4b -** Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
- **5.NF.5a -** Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
- **5.NF.6 -** Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
- **5.NF.7a -** Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.
- **5.NF.7b -** Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.
- **5.NF.7c -** Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?

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.

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- **4. -** Model with mathematics.
- **5. -** Use appropriate tools strategically.
- **6. -** Attend to precision.
- **7. -** Look for and make use of structure.

Central Idea / Enduring Understanding:

Students will…

- multiply a whole number and a fraction.
- multiply fractions.
- multiply fractions without using models.
- solve word problems involving mixed numbers.
- divide a whole number by a unit fraction.

Essential/Guiding Question:

- What strategies can be used to multiply and divide fractions?

Content:

- Hands On: Part of a Number
- Estimate Products of Fractions
- Hands On: Model Fraction Multiplication
- Multiply Whole Numbers and Fractions
- Hands On: Use Models to Multiply Fractions
- Multiply Fractions
- Multiply Mixed Numbers
- Hands On: Multiplication as Scaling
- Hands On: Division with Unit Fractions
- Divide Whole Numbers by Unit Fractions
- Divide Unit Fractions by Whole Numbers
- Problem-Solving Investigation: Draw a Diagram

Skills (Objectives):

- Explore how to find part of a number.
- Estimate products of fractions using compatible numbers and rounding.
- Explore multiplying whole numbers and fractions using models.
- Multiply whole numbers and fractions.
- Explore using models to multiply a fraction by a fraction.
- Multiply fractions.
- Multiply mixed numbers.
- Interpret multiplication of fractions as scaling.
- Divide whole numbers by unit fractions using models.
- Use bar diagrams to divide whole numbers by unit fractions.
- Use bar diagrams to divide unit fractions by whole numbers.
- Solve problems by drawing a diagram.

Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

NJSLS for Social Studies

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- **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

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Quick Write
- Turn to Your Partner
- Application Cards
- Sequence
- Analogy
- Send a Problem
- Modeling
- Summarize
- Ticket Out the Door
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:

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

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, "In My Kitchen".
- View online video to spark a discussion about how math is used in kitchens.
- Introduce the Essential Question: "What strategies can be used to multiply and divide fractions?"

Am I Ready?

Resources:

TE pg. 699

- TE/SE pg. 699
- Online Video
- TE/SE pg. 699

TE/SE pg. 701

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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. 702** • Review Vocabulary: decimal point, denominator, digit, divide, equivalent, greatest common factor (GCF), least common multiple (LCM), mixed numbers, multiply, number line
My Vocabulary Cards • Introduce vocabulary words and complete “My Vocabulary Cards” activity.	**TE/SE pg. 703-704** • New Vocabulary: scaling, unit fraction
My Foldable • Use this foldable to multiply fractions and mixed numbers by whole numbers. Complete the “My Foldable” activities.	**TE/SE pg. 705-706**
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 - Parts of a Number** **Objective:** Students will explore how to find part of a number.	**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 be used to multiply and divide fractions?” • Problem of the Day	**TE pg. 707A**
Build: • Draw It	**TE/SE pg. 707** • bar diagrams
Practice: • Talk About It • Practice It	**TE/SE pg. 708-709** • bar diagrams • bar diagrams
Apply: • Apply It • Write About It	**TE/SE pg. 710** • bar diagrams
Wrap Up: • Assign homework	**TE/SE pg. 711-712**

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Learning Opportunities/Strategies:	Resources:
Lesson 2 - Estimate Products of Fractions	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will estimate products of fractions using compatible numbers and rounding.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply and divide fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 713A-B** ● Review Vocabulary: decimal, fraction
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 713B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how you would estimate the product of ⅘ x ⅝ ." ● Independent Practice	**TE/SE pg. 713-715** ● bar diagrams, number lines ● Assign On Level set: 2-14 (even), 15-17
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 716**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 717-718** ● Turn to Your Partner TE pg. 718 ● SE pg. 717-718
Learning Opportunities/Strategies:	**Resources:**
Lesson 3 - Hands On - Model Fraction Multiplication	**Follow corresponding Lesson Presentation Slides.**
Objective: Students will explore multiplying whole numbers and fractions using models.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply and divide fractions?" ● Problem of the Day	**TE pg. 719A**
Build: ● Draw It	**TE/SE pg. 719** ● crayons or colored pencils

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Practice: ● Talk About It ● Practice It	**TE/SE pg. 720-721**
Apply: ● Apply It ● Write About It	**TE/SE pg. 722**
Wrap Up: ● Assign homework	**TE/SE pg. 723-724**
Learning Opportunities/Strategies: **Lesson 4 - Multiply Whole Numbers and Fractions** **Objective:** Students will multiply whole numbers 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: "What strategies can be used to multiply and divide fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 725A-B** ● Review Vocabulary: Commutative Property, fraction
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 725B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how you could find the product of 50 and ⅖ mentally." ● Independent Practice	**TE/SE pg. 725-727** ● fraction tiles ● Assign On Level set: 2-14 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 728**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 729-730** ● Quick Write TE pg. 730 ● SE pg. 729-730
Learning Opportunities/Strategies: **Lesson 5 - Hands On - Use Models to Multiply Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will explore using models to multiply a fraction by a fraction.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply and divide fractions?" ● Problem of the Day	**TE pg. 733A**
Build: ● Draw It	**TE/SE pg. 733** ● crayons or colored pencils
Practice: ● Talk About It ● Practice It	**TE/SE pg. 734-735**
Apply: ● Apply It ● Write About It	**TE/SE pg. 736**
Wrap Up: ● Assign homework	**TE/SE pg. 737-738**
Learning Opportunities/Strategies: **Lesson 6 - Multiply Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will multiply fractions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply and divide fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 739A-B** ● Review Vocabulary: denominator, multiply, numerator
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 739B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Will the product of 2/9 x 1/3 be the same as the product of 2/9 x 2/6? Explain." ● Independent Practice	**TE/SE pg. 739-741** ● Assign On Level set: 2-14 (even), 15-17

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 742**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 743-744** ● Turn to Your Partner TE pg. 744 ● SE pg. 743-744
Learning Opportunities/Strategies: **Lesson 7 - Multiply Mixed Numbers** **Objective:** Students will multiply 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: "What strategies can be used to multiply and divide fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 745A-B** ● Review Vocabulary: improper fraction, mixed number
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 745B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to find the product of two mixed numbers." ● Independent Practice	**TE/SE pg. 745-747** ● Assign On Level set: 2-14 (even), 15-18
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 748**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 749-750** ● Sequence TE pg. 750 ● SE pg. 749-750
Learning Opportunities/Strategies: **Lesson 8 - Hands On - Multiplication as Scaling** **Objective:** Students will interpret multiplication of fractions as scaling.	**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: “What strategies can be used to multiply and divide fractions?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 751A** ● New vocabulary: scaling
Build: ● Draw It	**TE/SE pg. 751** ● number line
Practice: ● Talk About It ● Practice It	**TE/SE pg. 752-753** ● number line ● number line
Apply: ● Apply It ● Write About It	**TE/SE pg. 754** ● number line
Wrap Up: ● Assign homework	**TE/SE pg. 755-756**
Learning Opportunities/Strategies: **Lesson 9 - Hands On - Division with Unit Fractions** **Objective:** Students will divide whole numbers by unit fractions using models. **Review Homework:** Review homework problems as needed.	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page**
Launch: ● Remind students of the Essential Question: “What strategies can be used to multiply and divide fractions?” ● Problem of the Day	**TE pg. 759A**
Build: ● Build It	**TE/SE pg. 759** ● fraction tiles
Practice: ● Talk About It ● Practice It	**TE/SE pg. 760-761** ● fraction tiles ● fraction tiles
Apply: ● Apply It ● Write About It	**TE/SE pg. 762** ● fraction tiles
Wrap Up: ● Assign homework	**TE/SE pg. 763-764**
Learning Opportunities/Strategies: **Lesson 10 - Divide Whole Numbers by Unit Fractions**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will use bar diagrams to divide whole numbers by unit fractions.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "What strategies can be used to multiply and divide fractions?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 765A-B** ● New Vocabulary: unit fraction
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 765B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Why can you use multiplication to check your answer to a division problem?" ● Independent Practice	**TE/SE pg. 765-767** ● Assign On Level set: 2-8 (even), 9-12
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 768** **TE pg. 769-770**
Climate Change Opportunity To examine the impact corn distribution has on agriculture. Students may solve real-world problems about the distribution of corn that involve the division of whole numbers by unit fractions.	**Climate Change Example:** 1. In the year 1990, Roy collected 8 tons of corn to sell. He splits his crops into thirds to sell to the local grocery stores. How much corn does each grocery store get? Use math tools. 2. In the year 2020, due to poor growing conditions Roy only collects 2 tons of corn to sell. If he still splits his crops into thirds to sell again, how much corn does each grocery store get now? Use math tools.
Wrap Up: ● Formative Assessment ● Assign homework	● Ticket Out the Door TE pg. 770 ● SE pg. 769-770
Learning Opportunities/Strategies: **Lesson 11 - Divide Unit Fractions by Whole Numbers**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will use bar diagrams to divide unit fractions by whole numbers.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch:	**TE pg. 771A-B**

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• Remind students of the Essential Question: "What strategies can be used to multiply and divide fractions?" • Developing Vocabulary • Problem of the Day	• Review Vocabulary: unit fraction
Build: • Investigate the Math: Explore, Model, Extend	**TE pg. 771B**
Practice: • Math in My World • Guided Practice • Talk Math ○ Students turn and talk: "What multiplication equation can you use to check your answer to Example 2? Explain." • Independent Practice	**TE/SE pg. 771-773** • Assign On Level set: 2-8 (even), 9-12
Apply: • Problem Solving • Brain Builders	**TE/SE pg. 774**
Wrap Up: • Complete formative assessment • Assign homework	**TE/SE pg. 775-776** • Modeling TE pg. 776 • SE pg. 775-776
Learning Opportunities/Strategies: **Lesson 12 - Problem-Solving Investigation - Strategy: 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 be used to multiply and divide fractions?" • Problem of the Day	**TE pg. 777A-B**
Build: • Prepare • Learn the Strategy	• TE pg. 777B • TE/SE pg. 777
Practice: • Practice the Strategy	**TE/SE pg. 778**
Apply: • Apply the Strategy • Review the Strategy	**TE/SE pg. 779-780**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 781-782** ● Ticket Out the Door TE pg. 782 ● SE pg. 781-782
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: "What strategies can be used to multiply and divide fractions?"	
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 783-785**
Reflect:	**TE/SE pg. 786**
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	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	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	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

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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	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	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	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 11: Measurement

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.M.1 -** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
- **5.DL.5 -** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. For

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example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.
- **5.DL.2-**Develop strategies to collect, organize and represent data of various types and from various sources. Communicate results digitally through a data visual (e.g. chart, storyboard, video presentation).
- **5.DL.3**- Collect and clean data to be analyzable (e.g. make sure each entry is formatted correctly, deal with missing or incomplete data).

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…
- convert customary units of length.
- convert customary units of weight.
- convert customary units of capacity.
- use a line plot to represent measurement data.
- convert metric units of measurement.

Essential/Guiding Question:
- How can I use measurement conversions to solve real-world problems?

Content:
- Hands On: Measure with a Ruler
- Convert Customary Units of Length
- Problem-Solving Investigation: Use Logical Reasoning
- Hands On: Estimate and Measure Weight
- Convert Customary Units of Weight
- Hands On: Estimate and Measure Capacity
- Convert Customary Units of Capacity
- Display Measurement Data on a Line Plot
- Hands On: Metric Rulers
- Convert Metric Units of Length
- Hands On: Estimate and Measure Metric Mass
- Convert Metric Units of Mass
- Convert Metric Units of Capacity

Skills (Objectives):
- Measure length to the nearest half inch and quarter inch.
- Convert measurements of length within the customary system.
- Solve problems by using logical reasoning.
- Estimate the weight of objects and use a balance to measure the weight of objects.
- Convert measurements of weight within the customary system.
- Estimate and measure the capacity of liquids.
- Convert measurements of capacity within the customary system.
- Display measurement data in fractions of a unit on a line plot and solve real-world problems.
- Measure the length of objects to the nearest centimeter and millimeter.
- Convert measurements of length within the metric system.
- Estimate the mass of objects and use a balance to measure the mass of objects.
- Convert measurements of mass within the metric system.
- Convert measurements of capacity within the metric system.

Interdisciplinary Connection(s):

NJSLS for Literacy
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.

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- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Quick Write
- Error Analysis
- Sequence
- Ticket Out the Door
- Written Reflections
- Summarize
- Debriefing
- Self-Assessment
- Talk Math
- Independent Practice
- Check My Progress

Summative Assessment:

- My Review
- Reflect
- Chapter 11 - Assessment
- Chapter 11 - Performance Task

Benchmark Assessment:

- n/a

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, "My Favorite Animals". ● View online video to spark a discussion about how math is used in animal life. ● Introduce the Essential Question: "How can I use measurement conversions to solve real-world problems?"	**TE pg. 787** ● TE/SE pg. 787 ● Online Video ● TE/SE pg. 787
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. 789**
My Math Words ● Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 790** ● Review Vocabulary: capacity, length, estimate, weight
My Vocabulary Cards ● Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 791-798** ● New Vocabulary: capacity, centimeter, convert, cup, customary system, fair share, fluid ounce, foot, gallon, gram, inch, kilogram, kilometer, length, mass, meter, metric system, mile, milligram, milliliter, millimeter, ounce, pint, pound, quart, ton, weight, yard
My Foldable ● This foldable compares capacity using gallons, quarts, pints, and cups. Complete the "My Foldable" activities.	**TE/SE pg. 799-800**
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 - Measure with a Ruler** **Objective:** Students will measure length to the nearest half-inch and quarter-inch.	**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 measurement conversions to solve real-world problems?"	**TE pg. 801A**

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• Developing Vocabulary • Problem of the Day **Build:** • Measure It **Practice:** • Talk About It • Practice It **Apply:** • Apply It • Write About It **Wrap Up:** • Assign homework	• New Vocabulary: inch (in.), length **TE/SE pg. 801** • inch rulers, large paper clips **TE/SE pg. 802-803** • inch rulers, large paper clips • inch rulers, large paper clips **TE/SE pg. 804** • inch rulers **TE/SE pg. 805-806**
Learning Opportunities/Strategies: **Lesson 2 - Convert Customary Units of Length** **Objective:** Students will convert measurements of length within the customary system. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How can I use measurement conversions to solve real-world problems?" • 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 convert units from feet to inches." • 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. 807A-B** • New Vocabulary: convert, mile (mi), yard (yd), customary system, foot (ft), inch (in.) **TE pg. 807B** **TE/SE pg. 807-809** • bar diagrams, number lines • Assign On Level set: 4-18 (even), 19-23 **TE/SE pg. 810** **TE pg. 811-812** • Error Analysis TE pg. 812 • SE pg. 811-812

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Learning Opportunities/Strategies:	Resources:
Lesson 3 - Problem-Solving Investigation - Strategy: Use Logical Reasoning **Objective:** Students will solve problems by using logical reasoning.	**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 measurement conversions to solve real-world problems?" ● Problem of the Day	**TE pg. 813A-B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 813B ● TE/SE pg. 813
Practice: ● Practice the Strategy	**TE/SE pg. 814**
Apply: ● Apply the Strategy ● Review the Strategy	**TE/SE pg. 815-816**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 817-818** ● Ticket Out the Door TE pg. 818 ● SE pg. 817-818
Learning Opportunities/Strategies: **Lesson 4 - Hands On - Estimate and Measure Weight** **Objective:** Students will estimate the weight of objects and use a balance to measure the weight of objects.	**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 measurement conversions to solve real-world problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 819A** ● New Vocabulary: ounce (oz), pound (lb), weight
Build: ● Measure It	**TE/SE pg. 819** ● balance, ounce and pound weights
Practice: ● Talk About It ● Practice It	**TE/SE pg. 820-821** ● balance, ounce and pound weights ● balance, ounce and pound weights

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Apply: ● Apply It ● Write About It	**TE/SE pg. 822** ● balance, ounce and pound weights
Wrap Up: ● Assign homework	**TE/SE pg. 823-824**
Learning Opportunities/Strategies: **Lesson 5 - Convert Customary Units of Weight**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will convert measurements of weight within the customary system.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How can I use measurement conversions to solve real-world problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 825A-B** ● New Vocabulary: ounce (oz), pound (lb), ton (T), weight
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 825B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Explain how to compare 22 ounces to 2 pounds." ● Independent Practice	**TE/SE pg. 825-827** ● Assign On Level set: 4-16 (even), 17-21
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 828**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 829-830** ● Sequence TE pg. 830 ● SE pg. 829-830
Learning Opportunities/Strategies: **Lesson 6 - Hands On - Estimate and Measure Capacity**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will estimate and measure the capacity of liquids.	
Review Homework: Review homework problems as needed.	**Student Homework Page**

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Launch: ● Remind students of the Essential Question: “How can I use measurement conversions to solve real-world problems?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 833A** ● New Vocabulary: capacity, gallons, pints, cups
Build: ● Measure It	**TE/SE pg. 833** ● cup, pint, quart, and gallon containers
Practice: ● Talk About It ● Practice It	**TE/SE pg. 834-835** ● quart and gallon containers
Apply: ● Apply It ● Write About It	**TE/SE pg. 836** ● cup, pint, quart, and gallon containers
Wrap Up: ● Assign homework	**TE/SE pg. 837-838**
Learning Opportunities/Strategies: **Lesson 7 - Convert Customary Units of Capacity** **Objective:** Students will convert measurements of capacity within the customary system.	**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 measurement conversions to solve real-world problems?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 839A-B** ● New Vocabulary: capacity, fluid ounce (fl oz), gallon (gal), pint (pt), quart (qt), cup (c)
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 839B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Explain how to compare 18 fluid ounces to 2 pints.” ● Independent Practice	**TE/SE pg. 840-841** ● Assign On Level set: 4-20 (even), 21-24
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 842**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 843-844** ● Sequence TE pg. 844 ● SE pg. 843-844
Learning Opportunities/Strategies: **Lesson 8 - Display Measurement Data on a Line Plot** **Objective:** Students will display measurement data in fractions of a unit on a line plot and solve real-world 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 measurement conversions to solve real-world problems?" ● Developing Vocabulary ● Revise Problem of the Day, available on https://docs.google.com/presentation/d/13n0b_I1KZH3vDIFT62gZY7cwm8x2Rs0lw1rTtI3FU3g/edit?usp=sharing	**TE pg. 845A-B** ● New Vocabulary: fair share
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 845B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Describe a situation in everyday life in which you would want to find a fair share." ● Independent Practice	**TE/SE pg. 845-847** ● Assign On Level set: 2, 4, 6-9
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 848**
Wrap Up: ● Closure, available on https://docs.google.com/presentation/d/13n0b_I1KZH3vDIFT62gZY7cwm8x2Rs0lw1rTtI3FU3g/edit?usp=sharing ● Assign homework	**TE pg. 849-850** ● Ticket Out the Door TE pg. 850 ● SE pg. 849-850
Learning Opportunities/Strategies: **Lesson 9 - Hands On - Metric Rulers** **Objective:** Students will measure the length of objects to the nearest centimeter and millimeter.	**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 use measurement conversions to solve real-world problems?" ● Problem of the Day	**TE pg. 851A**
Build: ● Measure It	**TE/SE pg. 851** ● centimeter rulers
Practice: ● Talk About It ● Practice It	**TE/SE pg. 852-853**
Apply: ● Apply It ● Write About It	**TE/SE pg. 854**
Wrap Up: ● Assign homework	**TE/SE pg. 855-856**
Learning Opportunities/Strategies: **Lesson 10 - Convert Metric Units of Length** **Objective:** Students will convert measurements of length within the metric system.	**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 measurement conversions to solve real-world problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 857A-B** ● New Vocabulary: centimeter (cm), kilometer (km), meter (m), metric system, millimeter (mm)
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 857B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "How can you use mental math to convert 7.38 kilometers to meters?" ● Independent Practice	**TE/SE pg. 857-859** ● Assign On Level set: 4-16 (even), 7-21

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 860**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 861-862** ● Self-Assessment TE pg. 862 ● SE pg. 861-862
Learning Opportunities/Strategies: **Lesson 11 - Hands On - Estimate and Measure Metric Mass** **Objective:** Students will estimate the mass of objects and use a balance to measure the mass of objects.	**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 measurement conversions to solve real-world problems?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 865A** ● New vocabulary: gram (g), kilogram (kg), mass
Build: ● Measure It	**TE/SE pg. 865** ● balances, gram weight
Practice: ● Talk About It ● Practice It	**TE/SE pg. 866-867** ● balances, gram weight ● balances, gram weight
Apply: ● Apply It ● Write About It	**TE/SE pg. 868**
Wrap Up: ● Assign homework	**TE/SE pg. 869-870**
Learning Opportunities/Strategies: **Lesson 12 - Convert Metric Units of Mass** **Objective:** Students will convert measurements of mass within the metric system.	**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 measurement conversions to solve real-world problems?"	**TE pg. 871A-B**

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• 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 is a more reasonable estimate for the mass of a baseball: 140 milligrams, 140 grams, or 140 kilograms? Explain." • Independent Practice **Apply:** • Problem Solving • Brain Builders **Wrap Up:** • Complete formative assessment • Assign homework	• New Vocabulary: gram (g), kilogram (kg), mass, milligram (mg) **TE pg. 871B** **TE/SE pg. 871-873** • Assign On Level set: 6-18 (even), 19-23 **TE/SE pg. 874** **TE pg. 875-876** • Ticket Out the Door TE pg. 876 • SE pg. 875-876
Learning Opportunities/Strategies: **Lesson 13 - Convert Metric Units of Capacity** **Objective:** Students will convert measurements of capacity within the metric system. **Review Homework:** Review homework problems as needed. **Launch:** • Remind students of the Essential Question: "How can I use measurement conversions to solve real-world problems?" • 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 unit would you use to measure the capacity of a glass of milk: milliliter or liter? Explain." • Independent Practice	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page** **TE pg. 877A-B** • New Vocabulary: liter (L), milliliter (mL) **TE pg. 877B** **TE/SE pg. 877-879** • Assign On Level set: 6-18 (even), 19-23

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Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 880**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 881-882** ● Ticket Out the Door TE pg. 882 ● SE pg. 881-882
Learning Opportunities/Strategies: **Chapter 11 - 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 use measurement conversions to solve real-world problems?"	
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 883-885**
Reflect:	**TE/SE pg. 886**
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	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	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 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	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	• 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 12: Geometry

Stage 1: Desired Results

Standards & Indicators:

NJSLS for Mathematics

- **5.M.2 -** Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

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- **5.M.3 -** Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.
- **5.M.4 -** Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
- **5.M.4b -** Apply the formulas and for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.
- **5.M.4c -** Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.
- **5.G.3 -** Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.
- **5.G.4 -** Classify two-dimensional figures in a hierarchy based on properties.

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…

- classify polygons.
- classify triangles.
- classify, quadrilaterals.
- use attributes to describe two-dimensional figures.
- find the volume of prisms.

Essential/Guiding Question:

- How does geometry help me solve problems in everyday life?

Content:

- Polygons
- Hands On: Sides and Angles of Triangles
- Classify Triangles
- Hands On: Sides and Angles of Quadrilaterals
- Classify Quadrilaterals
- Hands On: Build Three-Dimensional Figures
- Three-Dimensional Figures
- Hands On: Use Models to Find Volume
- Volume in Prisms
- Hands On: Build Composite Figures
- Volume of Composite Figures
- Problem-Solving Investigation: Make a Model

Skills (Objectives):

- Classify two-dimensional figures based on properties.
- Measure the sides and angles of triangles.
- Classify triangles based on attributes, such as side measures and angle measures.
- Measure the sides and angles of quadrilaterals.
- Classify quadrilaterals based on attributes, such as congruent sides, parallel sides, and right angles.
- Build nets and explore properties of three-dimensional figures.
- Describe properties of three-dimensional figures.
- Use models to find the volume of rectangular prisms.
- Use volume formulas to find the volume of rectangular prisms.
- Use models to build composite figures and find the volume of composite figures.
- Find the volume of composite figures by relating volume to the operations of multiplication and addition.
- Make a model to solve problems.

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Interdisciplinary Connection(s):

NJSLS for Literacy

- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **RI.MF.5.6.** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
- **L.VL.5.2.** Determine or clarify the meaning of unknown and multiple-meaning academic **and domain-specific** words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.
- **L.KL.5.1.** Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- **SL.ES.5.3.** Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.
- **SL.PE.5.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.II.5.2.** Summarize a written text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
- **SL.AS.5.6.** Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

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

- **9.2.5.CAP.1**: Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.4.5.CI.**3: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
- **9.4.5.CT.1**: Identify and gather relevant data that will aid in the problem-solving process.
- **9.4.5.CT.4**: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.
- **9.4.5.IML.2**: Create a visual representation to organize information about a problem or issue.

Stage 2: Assessment Evidence

Diagnostic Assessment:

- Am I Ready?

Formative Assessments:

- Analogy Prompt
- Ticket Out the Door
- Quick Write
- Modeling
- Quick Draw
- Written Reflections

Summative Assessment:

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

Benchmark Assessment:

- Benchmark Test 4 (covers chapters 1-12)

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• Turn to Your Partner • Send a Problem • 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 Travel!" • View online video to spark a discussion about how math is used in traveling. • Introduce the Essential Question: "How does geometry help me solve problems in everyday life?"	**TE pg. 887** • TE/SE pg. 887 • Online Video • TE/SE pg. 887
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. 889**
My Math Words • Review vocabulary words and complete "My Math Words" activity.	**TE/SE pg. 890** • Review Vocabulary: acute angle, lines, parallel, right angle, angles, obtuse angle, perpendicular
My Vocabulary Cards • Introduce vocabulary words and complete "My Vocabulary Cards" activity.	**TE/SE pg. 891-900** • New Vocabulary: acute triangle, attribute, base, composite figures, congruent angles, congruent figures, congruent sides, cube, cubic unit, edge, equilateral triangle, face, hexagon, isosceles triangle, net, obtuse triangle, octagon, parallelogram, pentagon, polygon, prism, rectangle, rectangular prism, regular polygon, rhombus, right triangle, scalene triangle, square, three-dimensional figure, trapezoid, triangular prism, unit cube, vertex, volume
My Foldable • This foldable shows examples of polygons. Complete the "My Foldable" activities.	**TE/SE pg. 901-902**
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 - Polygons**	Resources: **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will classify two-dimensional figures based on properties.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does geometry help me solve problems in everyday life?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 903A-B** ● New Vocabulary: congruent angles, congruent sides, hexagon, octagon, pentagon, polygon, regular polygon
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 903B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "Is a circle a polygon? Explain." ● Independent Practice	**TE/SE pg. 903-905** ● Assign On Level set: 2-10 (even), 11-15
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 906**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 907-908** ● Ticket Out the Door TE pg. 908 ● SE pg. 907-908
Learning Opportunities/Strategies: **Lesson 2 - Hands On - Sides and Angles of a Triangle**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will measure the sides and angles of triangles.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does geometry help me solve problems in everyday life?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 909A** ● Review Vocabulary: triangle
Build: ● Measure It	**TE/SE pg. 909** ● protractors, centimeter rulers

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Practice: ● Talk About It ● Practice It **Apply:** ● Apply It ● Write About It **Wrap Up:** ● Assign homework	**TE/SE pg. 910-911** ● protractors, centimeter rulers ● protractors, centimeter rulers **TE/SE pg. 912** ● protractors, centimeter rulers **TE/SE pg. 913-914**
Learning Opportunities/Strategies: **Lesson 3 - Classify Triangles** **Objective:** Students will classify triangles based on attributes, such as side measure and angle measures. **Review Homework:** Review homework problems as needed. **Launch:** ● Remind students of the Essential Question: "How does geometry help me solve problems in everyday life?" ● 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 an isosceles right triangle." ● 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. 915A-B** ● New Vocabulary: acute triangle, attribute, equilateral triangle, isosceles triangle, right triangle, scalene triangle **TE pg. 915B** **TE/SE pg. 915-917** ● Assign On Level set: 4-10 (even), 11-14 **TE/SE pg. 918** **TE pg. 919-920** ● Ticket Out the Door TE pg. 920 ● SE pg. 919-920
Learning Opportunities/Strategies: **Lesson 4 - Hands On - Sides and Angles of Quadrilaterals**	**Resources:** **Follow corresponding Lesson Presentation Slides.**

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Objective: Students will measure the sides and angles of quadrilaterals.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does geometry help me solve problems in everyday life?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 923A** ● Review Vocabulary: quadrilateral
Build: ● Measure It	**TE/SE pg. 923** ● centimeter or inch rulers, protractors
Practice: ● Talk About It ● Practice It	**TE/SE pg. 924-925** ● centimeter or inch rulers, protractors ● centimeter or inch rulers, protractors
Apply: ● Apply It ● Write About It	**TE/SE pg. 926** ● centimeter or inch rulers, protractors
Wrap Up: ● Assign homework	**TE/SE pg. 927-928**
Learning Opportunities/Strategies: **Lesson 5 - Classify Quadrilaterals**	**Resources:** **Follow corresponding Lesson Presentation Slides.**
Objective: Students will classify quadrilaterals based on attributes, such as congruent sides, parallel sides, and right angles.	
Review Homework: Review homework problems as needed.	**Student Homework Page**
Launch: ● Remind students of the Essential Question: "How does geometry help me solve problems in everyday life?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 929A-B** ● New Vocabulary: parallelogram, rectangle, rhombus, trapezoid, square
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 929B**
Practice: ● Math in My World ● Guided Practice ● Talk Math	**TE/SE pg. 929-931**

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○ Students turn and talk: "Tell why a square is a special kind of rectangle." ● Independent Practice	● Assign On Level set: 4-8 (even), 9-13
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 932**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 933-934** ● Modeling TE pg. 934 ● SE pg. 933-934
Learning Opportunities/Strategies: **Lesson 6 - Hands On - Build Three-Dimensional Figures** **Objective:** Students will build nets and explore properties of three-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 does geometry help me solve problems in everyday life?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 935A** ● New Vocabulary: congruent figures, cube, rectangular prism, three-dimensional figure, face, net
Build: ● Build It	**TE/SE pg. 935** ● grid paper, scissors, tape
Practice: ● Talk About It ● Practice It	**TE/SE pg. 936-937** ● grid paper, scissors, tape
Apply: ● Apply It ● Write About It	**TE/SE pg. 938** ● grid paper, scissors, tape
Wrap Up: ● Assign homework	**TE/SE pg. 939-940**
Learning Opportunities/Strategies: **Lesson 7 - Three-Dimensional Figures** **Objective:** Students will describe properties of three-dimensional figures.	**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 does geometry help me solve problems in everyday life?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 941A-B** ● New Vocabulary: base, cube, prism, rectangular prism, three-dimensional figure, triangular prism, vertex, edge, face
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 941B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “Describe the differences between a triangular prism and a rectangular prism.” ● Independent Practice	**TE/SE pg. 941-943** ● Assign On Level set: 2-8 (even), 9-11
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 944**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE/SE pg. 945-946** ● Quick Draw TE pg. 946 ● SE pg. 945-946
Learning Opportunities/Strategies: **Lesson 8 - Hands On - Use Models to Find Volume** **Objective:** Students will use models to find the volume of rectangular prisms. **Review Homework:** Review homework problems as needed.	**Resources:** **Follow corresponding Lesson Presentation Slides.** **Student Homework Page**
Launch: ● Remind students of the Essential Question: “How does geometry help me solve problems in everyday life?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 949A** ● New Vocabulary: cubic unit, unit cube, volume
Build: ● Build It	**TE/SE pg. 949** ● centimeter cubes
Practice: ● Talk About It ● Practice It	**TE/SE pg. 950-951** ● centimeter cubes ● centimeter cubes

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Apply: ● Apply It ● Write About It	**TE/SE pg. 952** ● centimeter cubes
Wrap Up: ● Assign homework	**TE/SE pg. 953-954**
Learning Opportunities/Strategies: **Lesson 9 - Volume of Prisms** **Objective:** Students will use volume formulas to find the volume of rectangular prisms.	**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 geometry help me solve problems in everyday life?" ● Developing Vocabulary ● Problem of the Day	**TE pg. 955A-B** ● New Vocabulary: volume
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 955B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: "If you know the area of the base of a rectangular prism and the prism's height, which formula would you use? Why?" ● Independent Practice	**TE/SE pg. 955-957** ● Assign On Level set: 4-8 (even), 9-12
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 958**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 959-960** ● Turn to Your Partner TE pg. 960 ● SE pg. 959-960
Learning Opportunities/Strategies: **Lesson 10 - Hands On - Build Composite Figures** **Objective:** Students will use models to build composite figures and find the volume of composite figures.	**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 does geometry help me solve problems in everyday life?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 961A** ● New Vocabulary: composite figure
Build: ● Build It	**TE/SE pg. 961** ● centimeter cubes
Practice: ● Talk About It ● Practice It	**TE/SE pg. 962-963** ● centimeter cubes ● centimeter cubes, composite figure
Apply: ● Apply It ● Write About It	**TE/SE pg. 964** ● centimeter cubes
Wrap Up: ● Assign homework	**TE/SE pg. 965-966**
Learning Opportunities/Strategies: **Lesson 11 - Volume of Composite Figures** **Objective:** Students will find the volume of composite figures by relating volume to the operations of multiplication and addition.	**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 geometry help me solve problems in everyday life?” ● Developing Vocabulary ● Problem of the Day	**TE pg. 967A-B** ● New Vocabulary: composite figure
Build: ● Investigate the Math: Explore, Model, Extend	**TE pg. 967B**
Practice: ● Math in My World ● Guided Practice ● Talk Math ○ Students turn and talk: “How is volume related to the operation of addition?” ● Independent Practice	**TE/SE pg. 967-969** ● Assign On Level set: 2-8 (even), 9-11
Apply: ● Problem Solving ● Brain Builders	**TE/SE pg. 970**

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Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 971-972** ● Ticket Out the Door TE pg. 972 ● SE pg. 971-972
Learning Opportunities/Strategies: **Lesson 12 - Problem-Solving Investigation - Strategy: Make a Model** **Objective:** Students will make a model 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 does geometry help me solve problems in everyday life?" ● Problem of the Day	**TE pg. 973A-B**
Build: ● Prepare ● Learn the Strategy	● TE pg. 973B ● TE/SE pg. 973, centimeter cubes
Practice: ● Practice the Strategy	**TE/SE pg. 974** ● centimeter cubes
Apply: ● Apply the Strategy ● Review the Strategy	**TE/SE pg. 975-976**
Wrap Up: ● Complete formative assessment ● Assign homework	**TE pg. 977-978** ● Ticket Out the Door TE pg. 978 ● SE pg. 977-978
Learning Opportunities/Strategies: **Chapter 12 - 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 geometry help me solve problems in everyday life?"	
Review: ● Vocabulary Check ● Concept Check ● Problem Solving ● Brain Builders	**TE/SE pg. 979-981**

Fifth Grade Mathematics

Reflect: **Assign homework:**	**TE/SE pg. 982** **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	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

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		Language Learner Guide to provide	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

Math Pacing Guide
Grade 5

MP	Chapter Breakdown	# of days allotted	# of days subtotal	# of days cumulative
MP1	**McGraw Hill: My Math - Chapter 1 - Place Value**		13	13
	• Chapter Introduction	1		
	• Lessons 1-9 (@ 1 lesson per day)	9		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP1	**McGraw Hill: My Math - Chapter 2 - Multiply Whole Numbers**		14	27
	• Chapter Introduction	1		
	• Lessons 1-10 (@ 1 lesson per day)	10		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP1	**McGraw Hill: My Math - Chapter 3 - Divide by a One-Digit Divisor**		17	44
	• Chapter Introduction	1		
	• Lessons 1-13 (@ 1 lesson per day)	13		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		

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	• Flex Day	1		
MP1	**Benchmark Test 1 (covers chapters 1-3)**	1		45
MP2	**McGraw Hill: My Math - Chapter 4 - Divide by a Two-Digit Divisor**		10	55
	• Chapter Introduction	1		
	• Lessons 1-6 (@ 1 lesson per day)	6		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP2	**McGraw Hill: My Math - Chapter 5 - Add and Subtract Decimals**		14	69
	• Chapter Introduction	1		
	• Lessons 1-10 (@ 1 lesson per day)	10		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP2	**McGraw Hill: My Math - Chapter 6 - Multiply and Divide Decimals**		18	87
	• Chapter Introduction	1		
	• Lessons 1-14 (@ 1 lesson per day)	14		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP2	**Benchmark Test 2 (covers chapters 4-6)**	1		88
MP2-3	**McGraw Hill: My Math - Chapter 7 - Expressions and Patterns**		13	101
	• 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 and Decimals**		12	113
	• Chapter Introduction	1		
	• Lessons 1-8 (@ 1 lesson per day)	8		
	• Review and Reflect	1		

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	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP3	**McGraw Hill: My Math - Chapter 9 - Add and Subtract Fractions**		17	130
	• Chapter Introduction	1		
	• Lessons 1-13 (@ 1 lesson per day)	13		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP3	**Benchmark Test 3 (covers chapters 7-9)**	1		131
MP3-4	**McGraw Hill: My Math - Chapter 10 - Multiply and Divide Fractions**		16	147
	• Chapter Introduction	1		
	• Lessons 1-12 (@ 1 lesson per day)	12		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP4	**McGraw Hill: My Math - Chapter 11 - Measurement**		17	164
	• Chapter Introduction	1		
	• Lessons 1-13 (@ 1 lesson per day)	13		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	1		
MP4	**McGraw Hill: My Math - Chapter 12 - Geometry**		15	179
	• Chapter Introduction	1		
	• Lessons 1-12 (@ 1 lesson per day)	12		
	• Review and Reflect	1		
	• Chapter Assessment • Chapter Performance Task	1		
	• Flex Day	0		
MP4	**Benchmark Test 4 (covers chapters 1-12)**	1		180