Unit 5 Reveal Grade 5

Content Area: **Math**
Course(s): **Math**
Time Period: **December**
Length: **4 weeks**
Status: **Published**

Unit overview

UNIT 5 PLANNER

Multiply Multi-Digit Whole Numbers

PACING: 12 days

LESSON	MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE	LESSON	KEY VOCABULARY
Unit Opener Mile-High Pennies Review estimation and multiplication skills using stacks of pennies.					
					Math Terms
5-1 Understand Powers and Exponents	Students write a power of 10 as a multiplication expression with factors of 10. Students write a power of 10 using a base of 10 and exponents.	Students explain the steps to take to write a power of 10 as a multiplication expression while using the passive voice.	Students demonstrate self-awareness of personal strengths and areas of challenge in mathematics.	5-1	base exponent exponential form power of 10
5-2 Patterns When Multiplying a Whole Number by Powers of 10	Students use patterns to determine products when multiplying whole numbers by powers of 10. Students explain patterns in the products when multiplying whole numbers by powers of 10.	Students talk about the patterns they see in products while answering *Wh-* questions.	Students employ techniques that can be used to help maintain focus and manage reactions to potentially frustrating situations.	5-2	base exponent factor power of 10
5-3 Estimate Products of Multi-Digit Factors	Students estimate products of multi-digit factors using the same strategies used to estimate products of lesser factors. Students use estimated products to make predictions about a calculated solution. Students use estimated product to assess the reasonableness of a calculated solution.	Students discuss estimating products while answering *Wh-* questions.	Students determine the strategies and analyses necessary to make informed decisions when engaging in mathematical practices.	5-3	estimate round
5-4 Use Area Models to Multiply Multi-Digit Factors	Students use an area model to determine partial products and add partial products to calculate the product.	Students explain how to use an area model to multiply while answering *Wh-* questions.	Students explore taking different perspectives on approaches to problem solving.	5-4	area model decompose partial products
5-5 Use Partial Products to Multiply Multi-Digit Factors	Students determine partial products by decomposing the factors and add partial products to calculate the product.	Students discuss how to solve multiplication equations using partial products while answering *Wh-* and Yes/No questions.	Students practice strategies for persisting at a mathematical task, such as setting a small goal or setting timers for remaining focused.	5-5	area model partial products
5-6 Relate Partial Products to an Algorithm	Students use an algorithm to multiply multi-digit factors by a one-digit factor. Students understand and explain a multiplication algorithm.	Students discuss strategies to multiply while using *as...as*.	Students collaborate with peers to complete a mathematical task and offer constructive feedback to the mathematical ideas posed by others.	5-6	algorithm partial products regroup
Math Probe Multiplication of 2-Digit Numbers Determine if a given strategy is a correct approach to find the product of two 2-digit numbers.					
5-7 Multiply Multi-Digit Factors Fluently	Students use an algorithm to multiply two multi-digit factors.	Students explain how to use an algorithm to multiply while answering *Wh-* and Yes/No questions.	Students identify and discuss the emotions experienced during math learning.	5-7	algorithm
Unit Review **Fluency Practice**					
Unit Assessment **Performance Task**					

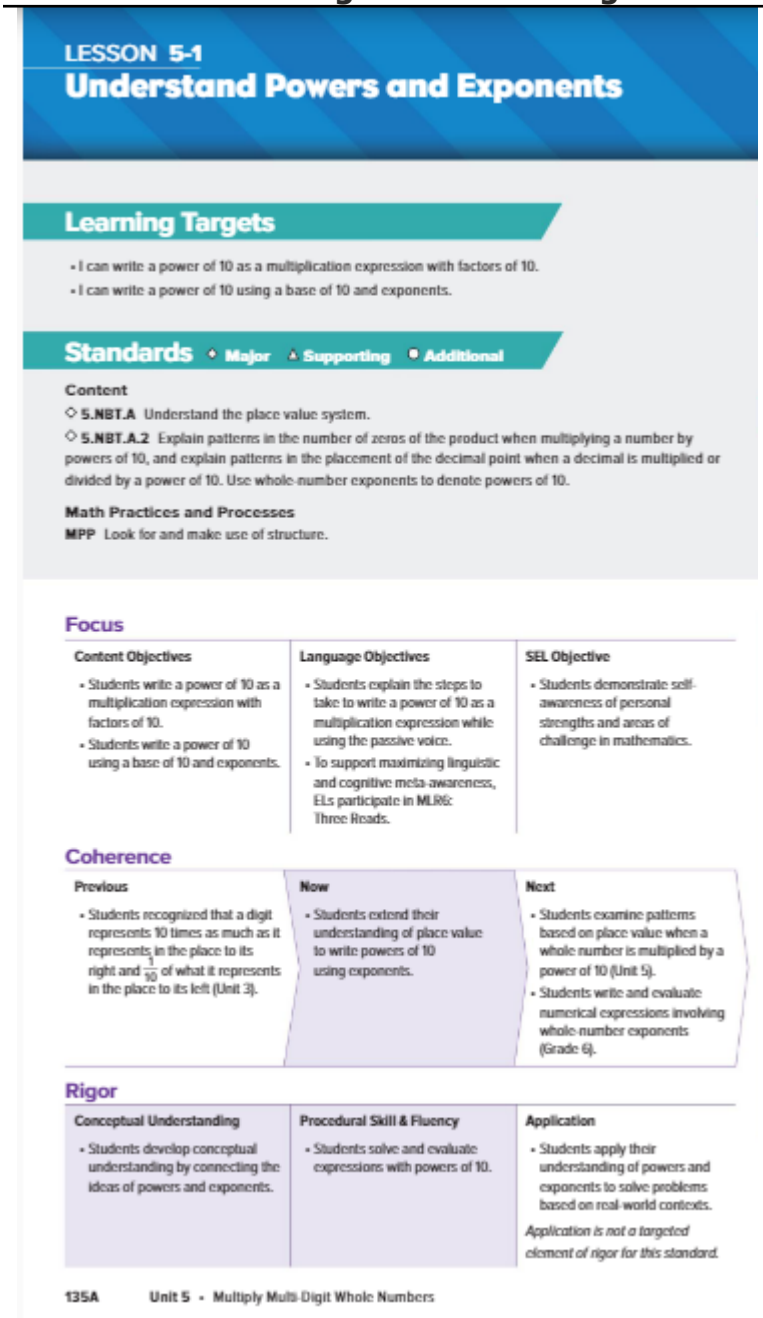
Enduring Understandings

See Above.

Essential Questions

See Above.

Instructional Strategies and Learning Activities



LESSON 5-1

Understand Powers and Exponents

Learning Targets

- I can write a power of 10 as a multiplication expression with factors of 10.
- I can write a power of 10 using a base of 10 and exponents.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **5.NBT.A** Understand the place value system.

◇ **5.NBT.A.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.

Math Practices and Processes

MPP Look for and make use of structure.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students write a power of 10 as a multiplication expression with factors of 10. • Students write a power of 10 using a base of 10 and exponents.	• Students explain the steps to take to write a power of 10 as a multiplication expression while using the passive voice. • To support maximizing linguistic and cognitive meta-awareness, ELs participate in MLR6: Three Reads.	• Students demonstrate self-awareness of personal strengths and areas of challenge in mathematics.

Coherence

Previous	Now	Next
• Students recognized that a digit represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left (Unit 3).	• Students extend their understanding of place value to write powers of 10 using exponents.	• Students examine patterns based on place value when a whole number is multiplied by a power of 10 (Unit 5). • Students write and evaluate numerical expressions involving whole-number exponents (Grade 6).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding by connecting the ideas of powers and exponents.	• Students solve and evaluate expressions with powers of 10.	• Students apply their understanding of powers and exponents to solve problems based on real-world contexts. *Application is not a targeted element of rigor for this standard.*

LESSON 5-2

Patterns When Multiplying a Whole Number by Powers of 10

Learning Targets

- I can determine the products of numbers multiplied by powers of 10 written with exponents.
- I can describe the pattern for multiplying by powers of 10.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **5.NBT.A** Understand the place value system.

◇ **5.NBT.A.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.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students use patterns to determine products when multiplying whole numbers by powers of 10. • Students explain patterns in the products when multiplying whole numbers by powers of 10.	• Students talk about the patterns they see in products while answering *Wh-* questions. • To support optimizing output, ELs participate in MLR1: Stronger and Clearer Each Time.	• Students employ techniques that can be used to help maintain focus and manage reactions to potentially frustrating situations.

Coherence

Previous	Now	Next
• Students recognized that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right (Grade 4). • Students extended their understanding of place value to write powers of 10 using exponents (Unit 5).	• Students examine patterns based on place value when a whole number is multiplied by a power of 10.	• Students estimate products of multi-digit factors to determine if calculations are reasonable (Unit 5). • Students write and evaluate numerical expressions involving whole-number exponents. (Grade 6).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop conceptual understanding by multiplying by powers of 10 and looking for patterns and understand the effect multiplying by a power of 10 has on a number.	• Students build upon the conceptual foundation for the effect of multiplying by a power of 10, which gives students some early experience developing proficiency.	• Students apply their understanding of powers and exponents to solve problems based on real-world contexts. *Application is not a targeted element of rigor for this standard.*

LESSON 5-3

Estimate Products of Multi-Digit Factors

Learning Targets

- I can explain how to estimate products of multi-digit factors.
- I can estimate products of multi-digit factors to determine if calculations are reasonable.
- I can use an estimated product to make predictions about a calculated solution.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **5.NBT.B** Perform operations with multi-digit whole numbers and with decimals to hundredths.

◇ **5.NBT.B.5** Fluently multiply multi-digit whole numbers using the standard algorithm.

Math Practices and Processes

MPP Use appropriate tools strategically.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students estimate products of multi-digit factors using the same strategies used to estimate products of lesser factors. • Students use estimated products to make predictions about a calculated solution. • Students use estimated products to assess the reasonableness of a calculated solution.	• Students discuss estimating products while answering *Wh*- questions. • To maximize linguistic and cognitive meta-awareness, ELs participate in MLR7: Compare and Connect.	• Students determine the strategies and analyses necessary to make informed decisions when engaging in mathematical practices.

Coherence

Previous	Now	Next
• Students multiplied two two-digit numbers, using strategies based on place value and the properties of operations (Grade 4). • Students examined place value patterns when a whole number was multiplied by a power of 10 (Unit 5).	• Students estimate products of multi-digit factors to determine if calculations are reasonable.	• Students will find products of two- and three-digit factors using area models and partial products (Unit 5). • Students will add, subtract, multiply, and divide using the standard algorithm (Grade 6).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build their understanding of multiplying multi-digit numbers by estimating products. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students build proficiency estimating the product of multiplying multi-digit numbers.	• Students estimate and find products to solve problems based on real-world contexts. *Application is not a targeted element of rigor for this standard.*

LESSON 5-4

Use Area Models to Multiply Multi-Digit Fac

Learning Target

- I can use an area model and partial products to multiply multi-digit whole numbers.

Standards ◆ Major △ Supporting ○ Additional

Content

◇ **5.NBT.B** Perform operations with multi-digit whole numbers and with decimals to hundredths.

◇ **5.NBT.B.5** Fluently multiply multi-digit whole numbers using the standard algorithm.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Look for and make use of structure.

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objective

- Students use an area model to determine partial products and add partial products to calculate the product.

Language Objectives

- Students explain how to use an area model to multiply while answering *Wh-* questions.
- To support optimizing output, ELs participate in MLR4: Info Gap.

SEL Objective

- Students explore taking different perspectives on approaches to problem solving.

Coherence

Previous

- Students multiplied two 2-digit numbers, using strategies based on place value and the properties of operations (Grade 4).
- Students estimated products of multi-digit factors to determine if calculations are reasonable (Unit 5).

Now

- Students find products of two- and three-digit factors using area models and partial products.

Next

- Students use the partial products strategy to multiply a multi-digit number by a multi-digit number (Unit 5).
- Students add, subtract, multiply, and divide using the standard algorithm (Grade 6).

Rigor

Conceptual Understanding

- Students connect multi-digit multiplication with area models and partial products to make use of students' conceptual understanding of place value.

Conceptual understanding is not a targeted element of rigor for this standard.

Procedural Skill & Fluency

- Students use the conceptual framework provided by the Distributive Property to organize their work and gain skill and fluency in multiplying single-digit numbers by multi-digit numbers.

Application

- Students use the Distributive Property to solve problems based on real-world contexts.

Application is not a targeted element of rigor for this standard.

LESSON 5-5

Use Partial Products to Multiply Multi-Digit Factors

Learning Targets

- I can use partial products to help me multiply multi-digit factors.
- I can explain how to use partial products to multiply.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **5.NBT.B** Perform operations with multi-digit whole numbers and with decimals to hundredths.

◇ **5.NBT.B.5** Fluently multiply multi-digit whole numbers using the standard algorithm.

Math Practices and Processes

MPP Use appropriate tools strategically.

MPP Look for and make use of structure.

Focus

Content Objective	Language Objectives	SEL Objective
• Students determine partial products by decomposing the factors and adding partial products to calculate the product.	• Students discuss how to solve multiplication equations using partial products while answering *Wh-* and Yes/No questions. • To support sense-making and cultivating conversation, ELs participate in MLR8: Discussion Supports and MLR3: Critique, Correct, and Clarify.	• Students practice strategies for persisting at a mathematical task, such as setting a small goal or setting timers for remaining focused.

Coherence

Previous	Now	Next
• Students multiplied two two-digit numbers, using place value and the properties of operations (Grade 4). • Students found products of two- and three-digit factors (Unit 5).	• Students use the partial products strategy to multiply a multi-digit number by a multi-digit number.	• Students connect the partial products strategy to an algorithm (Unit 5). • Students add, subtract, multiply, and divide using the standard algorithm (Grade 6).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build their understanding of multiplication by using partial products to multiply multi-digit factors. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students gain skill and fluency in evaluating partial products when multiplying multi-digit factors.	• Students apply their understanding of partial products to solve problems with real-world contexts. *Application is not a targeted element of rigor for this standard.*

LESSON 5-6

Relate Partial Products to an Algorithm

Learning Targets

- I can multiply using an algorithm.
- I can describe an algorithm for multiplication.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **5.NBT.B** Perform operations with multi-digit whole numbers and with decimals to hundredths.

◇ **5.NBT.B.5** Fluently multiply multi-digit whole numbers using the standard algorithm.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Look for and express regularity in repeated reasoning.

Focus

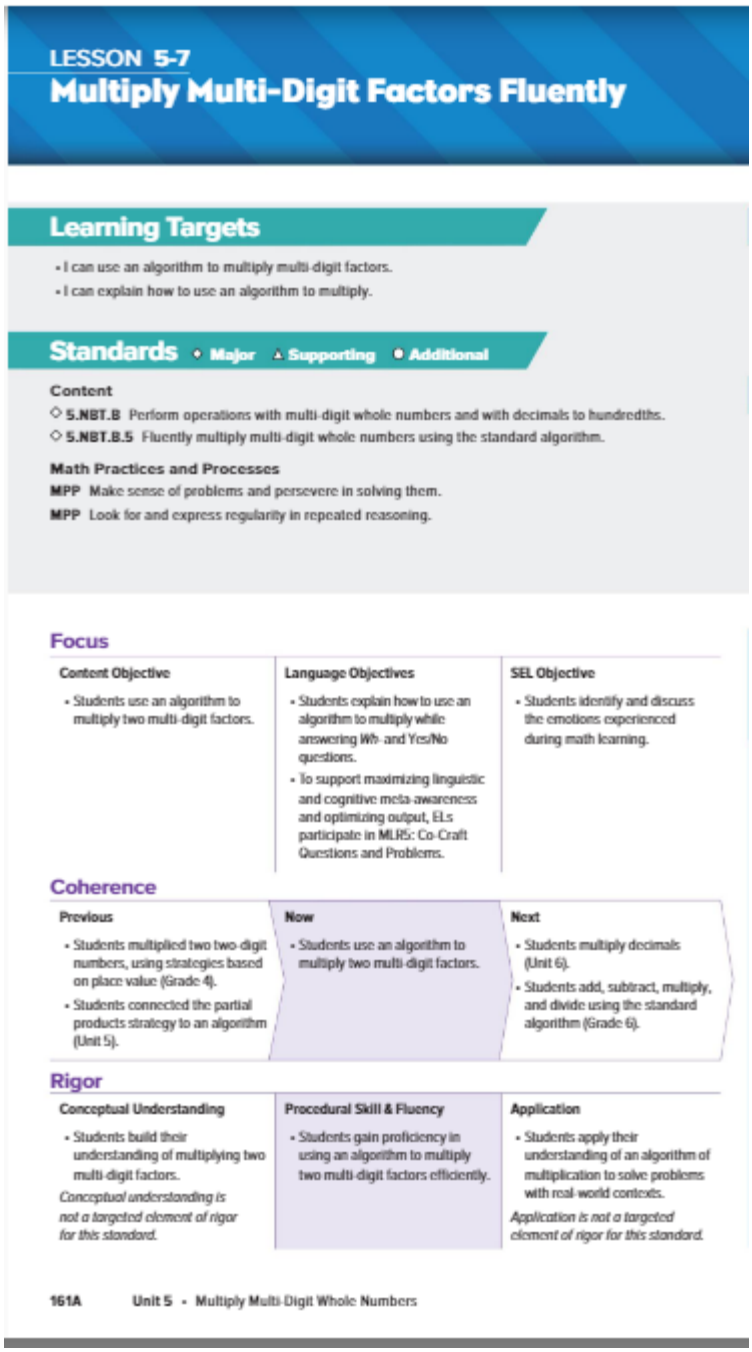
Content Objectives	Language Objectives	SEL Objective
• Students use an algorithm to multiply multi-digit factors by a one-digit factor. • Students understand and explain a multiplication algorithm.	• Students discuss strategies to multiply while using *as...as*. • To support optimizing output, ELs participate in MLR1: Stronger and Clearer Each Time.	• Students collaborate with peers to complete a mathematical task and offer constructive feedback to the mathematical ideas posed by others.

Coherence

Previous	Now	Next
• Students multiplied two two-digit numbers, using strategies based on place value and the properties of operations (Grade 4). • Students used the partial products strategy to multiply a multi-digit number by a multi-digit number (Unit 5).	• Students connect the partial products strategy to an algorithm, and use that algorithm to multiply multi-digit numbers by 1-digit numbers.	• Students will use an algorithm to multiply two multi-digit factors (Unit 5). • Students will add, subtract, multiply, and divide using the standard algorithm (Grade 6).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop an understanding of how they can solve problems using a multiplication algorithm. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students demonstrate procedural skill and fluency in performing the steps to solve multiplication equations using an algorithm.	• Students solve real-world multiplication problems using partial products and an algorithm. *Application is not a targeted element of rigor for this standard.*



LESSON 5-7

Multiply Multi-Digit Factors Fluently

Learning Targets

- I can use an algorithm to multiply multi-digit factors.
- I can explain how to use an algorithm to multiply.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **5.NBT.B** Perform operations with multi-digit whole numbers and with decimals to hundredths.

◇ **5.NBT.B.5** Fluently multiply multi-digit whole numbers using the standard algorithm.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use an algorithm to multiply two multi-digit factors.	• Students explain how to use an algorithm to multiply while answering *Wh-* and Yes/No questions. • To support maximizing linguistic and cognitive meta-awareness and optimizing output, ELs participate in MLR5: Co-Craft Questions and Problems.	• Students identify and discuss the emotions experienced during math learning.

Coherence

Previous	Now	Next
• Students multiplied two two-digit numbers, using strategies based on place value (Grade 4). • Students connected the partial products strategy to an algorithm (Unit 5).	• Students use an algorithm to multiply two multi-digit factors.	• Students multiply decimals (Unit 6). • Students add, subtract, multiply, and divide using the standard algorithm (Grade 6).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build their understanding of multiplying two multi-digit factors. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students gain proficiency in using an algorithm to multiply two multi-digit factors efficiently.	• Students apply their understanding of an algorithm of multiplication to solve problems with real-world contexts. *Application is not a targeted element of rigor for this standard.*

Integration of Career Readiness, Life Literacies and Key Skills

PFL.9.1.2. FI.1	Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards).
PFL.9.1.2.PB.2	Explain why an individual would choose to save money.
WRK.9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
WRK.9.2.5.CAP.2	Identify how you might like to earn an income.
WRK.9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and

	occupations.
WRK.9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
TECH.9.4.8.CI.1	Assess data gathered on varying perspectives on causes of climate change (e.g., cross-cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions (e.g., RI.7.9, 6.SP.B.5, 7.1.NH.IPERS.6, 8.2.8.ETW.4).
TECH.9.4.8.CI.4	Explore the role of creativity and innovation in career pathways and industries.
TECH.9.4.8.CT.2	Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).
TECH.9.4.8.CT.3	Compare past problem-solving solutions to local, national, or global issues and analyze the factors that led to a positive or negative outcome.
TECH.9.4.8.DC.2	Provide appropriate citation and attribution elements when creating media products (e.g., W.6.8).
TECH.9.4.8.DC.4	Explain how information shared digitally is public and can be searched, copied, and potentially seen by public audiences.
TECH.9.4.8.DC.5	Manage digital identity and practice positive online behavior to avoid inappropriate forms of self-disclosure.
TECH.9.4.8.DC.8	Explain how communities use data and technology to develop measures to respond to effects of climate change (e.g., smart cities).
TECH.9.4.8.TL.1	Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data-based decision-making.
TECH.9.4.8.TL.2	Gather data and digitally represent information to communicate a real-world problem (e.g., MS-ESS3-4, 6.1.8.EconET.1, 6.1.8.CivicsPR.4).
TECH.9.4.8.TL.3	Select appropriate tools to organize and present information digitally.
TECH.9.4.8.TL.5	Compare the process and effectiveness of synchronous collaboration and asynchronous collaboration.
TECH.9.4.8.TL.6	Collaborate to develop and publish work that provides perspectives on a real-world problem.
TECH.9.4.8.GCA.1	Model how to navigate cultural differences with sensitivity and respect (e.g., 1.5.8.C1a).
TECH.9.4.8.GCA.2	Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.
TECH.9.4.8.IML.2	Identify specific examples of distortion, exaggeration, or misrepresentation of information.
TECH.9.4.8.IML.3	Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping (e.g., 6.SP.B.4, 7.SP.B.8b).
TECH.9.4.8.IML.4	Ask insightful questions to organize different types of data and create meaningful visualizations.
TECH.9.4.8.IML.5	Analyze and interpret local or public data sets to summarize and effectively communicate the data.
TECH.9.4.8.IML.7	Use information from a variety of sources, contexts, disciplines, and cultures for a specific purpose (e.g., 1.2.8.C2a, 1.4.8.CR2a, 2.1.8.CHSS/IV.8.AI.1, W.5.8, 6.1.8.GeoSV.3.a, 6.1.8.CivicsDP.4.b, 7.1.NH. IPRET.8).
TECH.9.4.8.IML.12	Use relevant tools to produce, publish, and deliver information supported with evidence for an authentic audience.

Technology and Design Thinking

CS.3-5.8.1.5.CS.3	Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.
CS.3-5.8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
CS.3-5.8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from different views of the data.
CS.3-5.8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
	Data can be organized, displayed, and presented to highlight relationships.

Interdisciplinary Connections

LA.RI.5.1	Quote accurately from a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
LA.RI.5.2	Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
LA.RI.5.3	Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
LA.RI.5.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
LA.RI.5.5	Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.
LA.RI.5.6	Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.
LA.RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
LA.RI.5.8	Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).
LA.RI.5.9	Integrate and reflect on (e.g., practical knowledge, historical/cultural context, and background knowledge) information from several texts on the same topic in order to write or speak about the subject knowledgeably.
LA.RI.5.10	By the end of year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.
LA.W.5.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
LA.SL.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.
LA.L.5.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.L.5.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

- **Definitions of Differentiation Components**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

Differentiation occurring in this unit:

Use Differentiation guide in Teacher's manual for each unit

Modifications and Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

Modifications and Accommodations used in this unit:

Benchmark Assessments

Benchmark Assessments are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

Schoolwide Benchmark assessments:

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

DRA

Additional Benchmarks used in this unit:

End of Unit assessments

Formative Assessments

Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

Formative Assessments used in this unit:

Teacher Observations

Checklists

Questions and Discussions

Quizzes

Summative Assessments

Summative assessments evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

Summative assessments for this unit:

End of Unit Assessments

Instructional Materials

See Above

Standards

MATH.5.NBT.A.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.
MATH.5.NBT.B.5	With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.