Unit 9 Reveal Grade 3

Content Area: **Math**
Course(s):
Time Period: **March**
Length: **3 weeks**
Status: **Published**

Unit Overview

UNIT 9 PLANNER

Use Multiplication to Divide

PACING: 15 days

LESSON	MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE	LESSON	KEY VOCABULARY
Unit Opener IgNITE! Collect 4 Multiplication Students play a game that facilitates basic fact practice that requires logic and reasoning to win.					
9-1 Use Multiplication to Solve Division Equations	Students use an unknown-factor problem to solve a division equation.	Students explain how to use the relationship between multiplication and division using *can*.	Students determine the strategies and analyses necessary to make informed decisions when engaging in mathematical practices.	9-1	Math Terms fact family fact triangle quotient unknown
9-2 Divide by 2	Students use related multiplication facts to divide by 2.	Students describe the steps to solve a word problem using the expression *help you find*.	Students exchange ideas for mathematical problem-solving with a peer, listening attentively and providing thoughtful and constructive feedback.	9-2	fact triangle quotient unknown
9-3 Divide by 5 and 10	Students use related multiplication facts to divide by 5 and 10.	Students articulate a solution for a word problem about money using specific names for coins.	Students practice strategies for persisting at a mathematical task, such as setting a small goal or setting timers for remaining focused.	9-3	quotient unknown
9-4 Understand Division with 1 and 0	Students use patterns and rules to recall division facts with 1 and 0.	Students explain reasons for a solution to division facts using *because*.	Students actively listen without interruption as peers describe how they approached a complex mathematical task.	9-4	dividend divisor quotient
9-5 Divide by 3 and 6	Students use related multiplication facts to divide by 3 and 6.	Students explain an approach for solving a problem using the verb *determine*.	Students discuss and practice strategies for managing stressful situations.	9-5	fact triangle quotient unknown
9-6 Divide by 4 and 8	Students use related multiplication facts to divide by 4 and 8.	Students use an *if* statement to explain a conditional mathematical situation.	Students demonstrate self-awareness of personal strengths and areas of challenge in mathematics.	9-6	quotient unknown
Math Probe Word Problems Identify multiplication and division equations that represent problem situations.					
9-7 Divide by 9	Students use related multiplication facts to divide by 9.	Students relate division and multiplication using the preposition *by*.	Students recognize and work to understand the emotions of others and practice empathetic responses.	9-7	multiplication fact table
9-8 Divide by 7	Students use related multiplication facts to divide by 7.	Students introduce a reason to explain a mathematical result by using *Since....*	Students recognize personal strengths through thoughtful self-reflection.	9-8	multiplication fact table
9-9 Multiply and Divide Fluently within 100	Students use different multiplication and division strategies to multiply and divide.	Students introduce the solution to a word problem by using *So....*	Students discuss how a rule or routine can help develop mathematical skills and knowledge and be responsible contributors.	9-9	decompose pattern unknown
Unit Review **Fluency Practice**					
Performance Task **Unit Assessment**					

75A Unit 9 • Use Multiplication to Divide

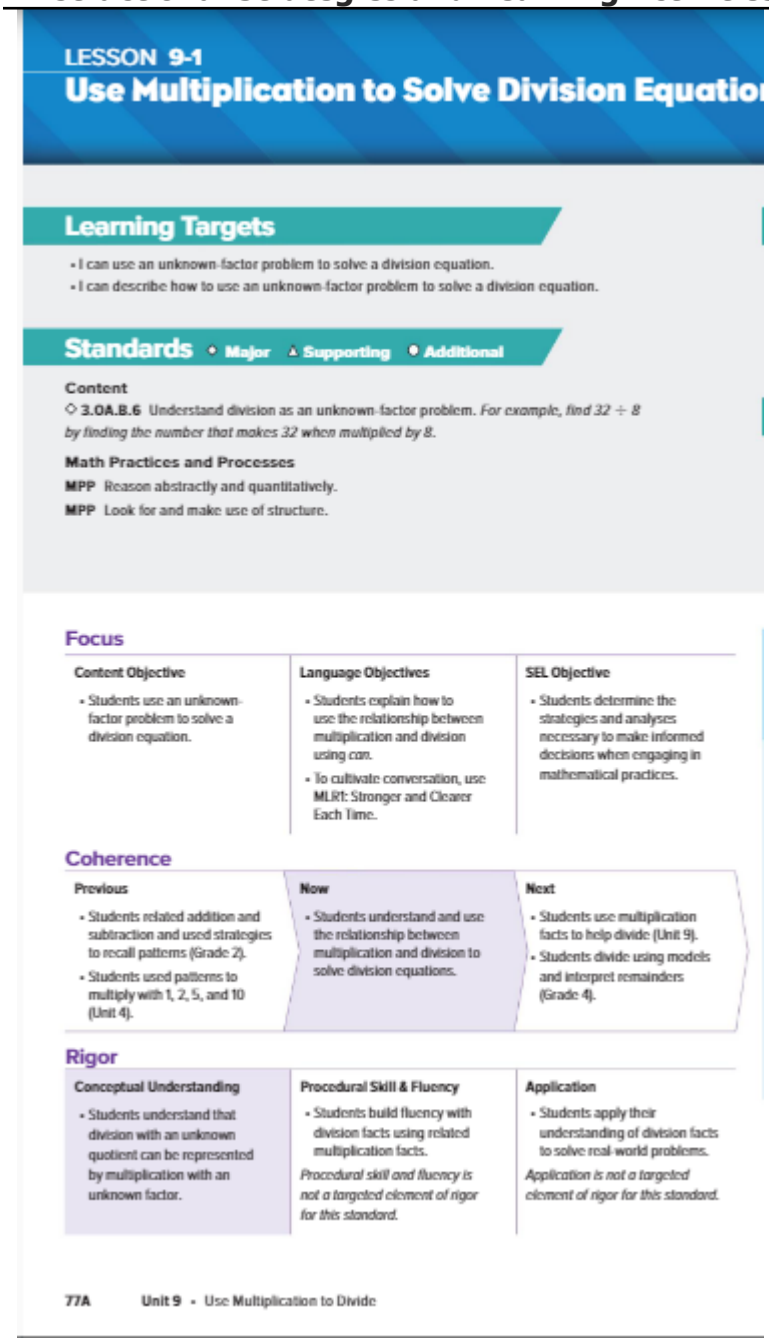
Enduring Understandings

See Above

Essential Questions

See Above

Instructional Strategies and Learning Activities



LESSON 9-1

Use Multiplication to Solve Division Equatio

Learning Targets

- I can use an unknown-factor problem to solve a division equation.
- I can describe how to use an unknown-factor problem to solve a division equation.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **3.OA.B.6** Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*

Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Look for and make use of structure.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use an unknown-factor problem to solve a division equation.	• Students explain how to use the relationship between multiplication and division using *can*. • To cultivate conversation, use MLR1: Stronger and Clearer Each Time.	• Students determine the strategies and analyses necessary to make informed decisions when engaging in mathematical practices.

Coherence

Previous	Now	Next
• Students related addition and subtraction and used strategies to recall patterns (Grade 2). • Students used patterns to multiply with 1, 2, 5, and 10 (Unit 4).	• Students understand and use the relationship between multiplication and division to solve division equations.	• Students use multiplication facts to help divide (Unit 9). • Students divide using models and interpret remainders (Grade 4).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students understand that division with an unknown quotient can be represented by multiplication with an unknown factor.	• Students build fluency with division facts using related multiplication facts. *Procedural skill and fluency is not a targeted element of rigor for this standard.*	• Students apply their understanding of division facts to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

LESSON 9-2

Divide by 2

Learning Targets

- I can use related multiplication facts to recall division facts with 2.
- I can describe strategies used to recall division facts with 2.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use related multiplication facts to divide by 2.	• Students describe the steps to solve a word problem using the expression *help you find*. • To support sense-making, use MLR6: Three Reads.	• Students exchange ideas for mathematical problem-solving with a peer, listening attentively and providing thoughtful and constructive feedback.

Coherence

Previous	Now	Next
• Students related addition and subtraction and used strategies to recall patterns (Grade 2). • Students multiplied by 2 (Unit 4).	• Students use the relationship between multiplication and division to divide by 2.	• Students use the relationship between multiplication and division to divide with more numbers (Unit 9). • Students divide using models and interpret remainders (Grade 4).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students understand they can use related multiplication facts to divide by 2. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students build fluency with dividing by 2.	• Students apply their understanding of dividing by 2 to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

LESSON 9-3

Divide by 5 and 10

Learning Targets

- I can use related multiplication facts to recall division facts with 5 and 10.
- I can describe strategies used to recall division facts with 5 and 10.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Attend to precision.

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use related multiplication facts to divide by 5 and 10.	• Students articulate a solution for a word problem about money using specific names for coins. • To maximize linguistic and cognitive meta-awareness, use MLR2: Collect and Display.	• 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 related addition and subtraction and used strategies to recall patterns (Grade 2). • Students multiplied by 5 and 10 (Unit 4).	• Students use the relationship between multiplication and division to divide by 5 and 10.	• Students use the relationship between multiplication and division to divide with more numbers (Unit 9). • Students divide using models and interpret remainders (Grade 4).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students understand they can use related multiplication facts to divide by 5 and 10. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students build fluency with dividing by 5 and 10.	• Students apply their understanding of dividing by 5 and 10 to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

LESSON 9-4

Understand Division with 1 and 0

Learning Targets

- I can use patterns and rules to recall division facts with 1 and 0.
- I can describe patterns and rules to recall division facts with 1 and 0.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Look for and make use of structure.

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objective

- Students use patterns and rules to recall division facts with 1 and 0.

Language Objectives

- Students explain reasons for a solution to division facts using *because*.
- To optimize output, use **MLR3**: Critique, Correct, and Clarify.

SEL Objective

- Students actively listen without interruption as peers describe how they approached a complex mathematical task.

Coherence

Previous

- Students related addition and subtraction and used strategies to recall patterns (Grade 2).
- Students used patterns to recall multiplication facts with 0 and 1 (Unit 4).

Now

- Students develop an understanding of patterns to recall division facts with 0 and 1.

Next

- Students multiply and divide using other single-digit factors and divisors (Unit 9).
- Students multiply and divide multi-digit numbers by whole numbers (Grade 4).

Rigor

Conceptual Understanding

- Students develop an understanding of division when the divisor or quotient is 1 and division when the dividend is 0.

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

Procedural Skill & Fluency

- Students build fluency with division facts involving 0 and 1 as they learn ways to remember these facts.

Application

- Students apply their understanding of division with 0 and 1 to solve real-world problems.

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

LESSON 9-5

Divide by 3 and 6

Learning Targets

- I can use related multiplication facts to recall division facts with 3 and 6.
- I can describe strategies used to recall division facts with 3 and 6.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Use appropriate tools strategically.

MPP Look for and make use of structure.

Focus

Content Objective

- Students use related multiplication facts to divide by 3 and 6.

Language Objectives

- Students explain an approach for solving a problem using the verb *determine*.
- To cultivate conversation, use MLR1: Stronger and Clearer Each Time.

SEL Objective

- Students discuss and practice strategies for managing stressful situations.

Coherence

Previous

- Students related addition and subtraction and used strategies to recall patterns (Grade 2).
- Students multiplied by 3 and 6 (Unit 5).

Now

- Students use appropriate tools to connect multiplication to division and recall division facts with 3 and 6.

Next

- Students extend their understanding of division facts dividing with other numbers (Unit 9).
- Students divide using models with numbers beyond basic facts (Grade 4).

Rigor

Conceptual Understanding

- Students develop an understanding of division with 3 and 6 using the relationship between multiplication and division.

Procedural Skill & Fluency

- Students build proficiency dividing by 3 and 6 using representations and strategies based on the relationship between multiplication and division.

Application

- Students apply their understanding of division facts with 3 and 6 to solve real-world problems.

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

LESSON 9-6

Divide by 4 and 8

Learning Targets

- I can use related multiplication facts to recall division facts with 4 and 8.
- I can describe strategies used to recall division facts with 4 and 8.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

MPP Look for and make use of structure.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use related multiplication facts to divide by 4 and 8.	• Students use an *if* statement to explain a conditional mathematical situation. • To support sense-making, use MLR6: Three Reads.	• Students demonstrate self-awareness of personal strengths and areas of challenge in mathematics.

Coherence

Previous	Now	Next
• Students related addition and subtraction and used strategies to recall patterns (Grade 2). • Students multiplied by 4 and 8 (Unit 5).	• Students divide by 4 and 8 using the relationship between multiplication and division.	• Students solve two-step problems involving multiplication and division (Unit 10). • Students divide multi-digit numbers using the relationship between multiplication and division (Grade 4).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop an understanding of division with 4 and 8 using the relationship between multiplication and division. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students build proficiency dividing by 4 or 8 using representations and strategies based on the relationship between multiplication and division.	• Students apply their understanding of division with 4 and 8 by representing and solving real-world problems. *Application is not a targeted element of rigor for this standard.*

LESSON 9-7

Divide by 9

Learning Targets

- I can use related multiplication facts to recall division facts with 9.
- I can describe strategies used to recall division facts with 9.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use related multiplication facts to divide by 9.	• Students relate division and multiplication using the preposition *by*. • To maximize linguistic and cognitive meta-awareness, use MLR8: Discussion Supports.	• Students recognize and work to understand the emotions of others and practice empathetic responses.

Coherence

Previous	Now	Next
• Students related addition and subtraction and used strategies to recall patterns (Grade 2). • Students multiplied by 9 (Unit 5).	• Students divide by 9 using their prior knowledge of multiplication and the multiplication fact table.	• Students divide with other numbers (Unit 9). • Students divide using models with numbers beyond basic facts (Grade 4).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop an understanding of division with 9 using the relationship between multiplication and division. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students build proficiency dividing by 9 using strategies and the relationship between multiplication and division.	• Students apply their understanding of dividing by 9 to solve problems with real-world contexts. *Application is not a targeted element of rigor for this standard.*

LESSON 9-8

Divide by 7

Learning Targets

- I can use related multiplication facts to recall division facts with 7.
- I can describe strategies used to recall division facts with 7.

Standards ◇ Major ▲ Supporting ○ Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

Focus

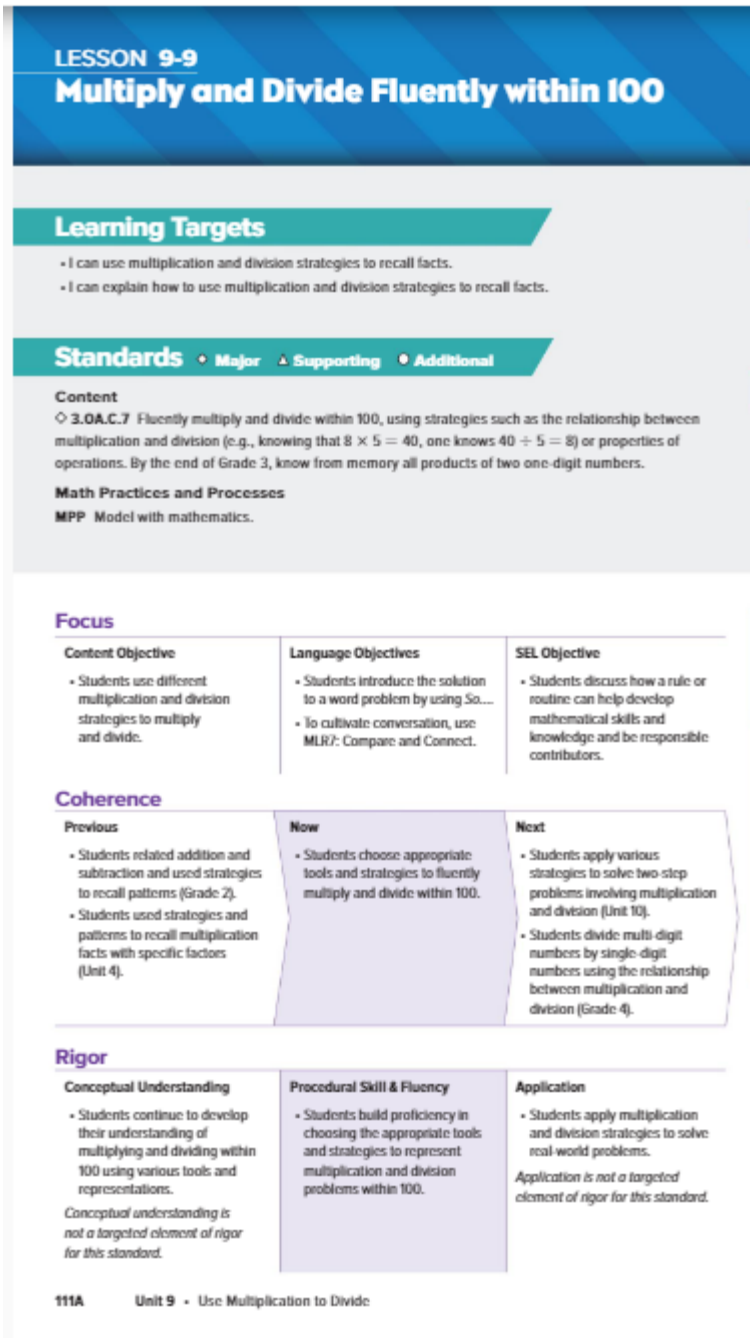
Content Objective	Language Objectives	SEL Objective
• Students use related multiplication facts to divide by 7.	• Students introduce a reason to explain a mathematical result by using *Since....* • To support sense-making, use MLR5: Co-Craft Questions.	• Students recognize personal strengths through thoughtful self-reflection.

Coherence

Previous	Now	Next
• Students related addition and subtraction and used strategies to recall patterns (Grade 2). • Students multiplied by 7 (Unit 5).	• Students divide by 7 using their prior knowledge of multiplication and the multiplication fact table.	• Students apply various strategies to fluently multiply and divide within 100 (Unit 9). • Students divide multi-digit numbers by single-digit numbers using the relationship between multiplication and division (Grade 4).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students develop an understanding of division with 7 using the relationship between multiplication and division. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students build proficiency dividing by 7 using strategies and the relationship between multiplication and division.	• Students apply their understanding of dividing by 7 to solve problems with real-world contexts. *Application is not a targeted element of rigor for this standard.*



LESSON 9-9

Multiply and Divide Fluently within 100

Learning Targets

- I can use multiplication and division strategies to recall facts.
- I can explain how to use multiplication and division strategies to recall facts.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Math Practices and Processes

MPP Model with mathematics.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use different multiplication and division strategies to multiply and divide.	• Students introduce the solution to a word problem by using *So....* • To cultivate conversation, use MLR7: Compare and Connect.	• Students discuss how a rule or routine can help develop mathematical skills and knowledge and be responsible contributors.

Coherence

Previous	Now	Next
• Students related addition and subtraction and used strategies to recall patterns (Grade 2). • Students used strategies and patterns to recall multiplication facts with specific factors (Unit 4).	• Students choose appropriate tools and strategies to fluently multiply and divide within 100.	• Students apply various strategies to solve two-step problems involving multiplication and division (Unit 10). • Students divide multi-digit numbers by single-digit numbers using the relationship between multiplication and division (Grade 4).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students continue to develop their understanding of multiplying and dividing within 100 using various tools and representations. *Conceptual understanding is not a targeted element of rigor for this standard.*	• Students build proficiency in choosing the appropriate tools and strategies to represent multiplication and division problems within 100.	• Students apply multiplication and division strategies to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

Integration of Career Readiness, Life Literacies and Key Skills

PFL.9.1.2.CR.1	Recognize ways to volunteer in the classroom, school and community.
PFL.9.1.2.CR.2	List ways to give back, including making donations, volunteering, and starting a business.
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.FP.1	Explain how emotions influence whether a person spends or saves.
PFL.9.1.2.FP.3	Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).

PFL.9.1.2.PB.1	Determine various ways to save and places in the local community that help people save and accumulate money over time.
PFL.9.1.2.PB.2	Explain why an individual would choose to save money.
TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.CT.2	Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
TECH.9.4.2.DC.3	Explain how to be safe online and follow safe practices when using the internet (e.g., 8.1.2.NI.3, 8.1.2.NI.4).
TECH.9.4.2.DC.6	Identify respectful and responsible ways to communicate in digital environments.
TECH.9.4.2.DC.7	Describe actions peers can take to positively impact climate change (e.g., 6.3.2.CivicsPD.1).
TECH.9.4.2.TL.2	Create a document using a word processing application.
TECH.9.4.2.TL.5	Describe the difference between real and virtual experiences.
TECH.9.4.2.TL.6	Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).
TECH.9.4.2.TL.7	Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2).

Technology and Design Integration

CS.K-2.8.1.2.AP.4	Break down a task into a sequence of steps.
CS.K-2.8.1.2.AP.5	Describe a program's sequence of events, goals, and expected outcomes.
CS.K-2.8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
CS.K-2.8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
CS.K-2.8.1.2.DA.3	Identify and describe patterns in data visualizations.
CS.K-2.8.1.2.DA.4	Make predictions based on data using charts or graphs.
CS.K-2.8.2.2.ITH.4	Identify how various tools reduce work and improve daily tasks.

Interdisciplinary Connections

LA.RI.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
LA.RI.3.2	Determine the main idea of a text; recount the key details and explain how they support the main idea.
LA.RI.3.3	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
LA.RI.3.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
LA.RI.3.5	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
LA.RI.3.6	Distinguish their own point of view from that of the author of a text.

LA.RI.3.8	Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence) to support specific points the author makes in a text.
LA.RI.3.9	Compare, contrast and reflect on (e.g., practical knowledge, historical/cultural context, and background knowledge) the most important points and key details presented in two texts on the same topic.
LA.RI.3.10	By the end of the year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.
LA.W.3.4	With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
LA.SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
LA.L.3.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

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:

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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:

Reveal 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 observation

Checklists

Questioning and Discussion

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

MA.3.OA.B.6	Understand division as an unknown-factor problem.
MA.3.OA.C.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.