Unit 1 Reveal Grade 3

Content Area: **Math**
Course(s): **Math**
Time Period: **September**
Length: **2 weeks**
Status: **Published**

Unit Overview



PACING: 10 days

LESSON		MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE	LESSON	KEY VOCABULARY
Unit Opener	IGNITE! The Longest Path	Explore the longest path to get from one side of a grid to the other.				
						Math Terms
1-1	Math Is Mine	Students discuss how math is used in their daily lives and in the lives of others. They describe their math story.	Students ask *What* questions to find out more about interests and opinions related to math. To optimize the support of sense-making, ELs will participate in MLR8: Discussion Supports.	Students describe their feelings and attitudes toward mathematics.	1-1	
1-2	Math Is Exploring and Thinking	Students discuss approaches for understanding a problem and strategies for solving it. Students make sense of quantities in the problem and look for connections among quantities.	Students describe the thinking process for solving a math problem using *could* and *might*. To optimize output, ELs will participate in MLR1: Stronger and Clearer Each Time.	Students recognize when they feel frustration during math class.	1-2	addends quantity
1-3	Math Is In My World	Students explore ways to show real-world situations and problems with mathematical models.	Students explain possible ways to solve a problem using *might*. To optimize output, ELs will participate in MLR3: Critique, Correct, and Clarify.	Students show appreciation for the different perspectives of their classmates.	1-3	model
1-4	Math Is Explaining and Sharing	Students construct arguments to support their thinking. Students respond to the ideas and arguments of others.	Students discuss arguments to support their thinking while answering *Wh-* and *Yes/No* questions and using thinking as needed. To cultivate conversation, ELs will participate in MLR7: Compare and Connect.	Students practice showing respect for classmates as they share ideas and thinking.	1-4	estimate exact
1-5	Math Is Finding Patterns	Students explore strategies for uncovering patterns and for using patterns to solve problems.	Students talk about the usefulness of mathematical patterns using *can*. To maximize linguistic and cognitive meta-awareness, ELs will participate in MLR2: Collect and Display.	Students practice self-control as they learn to take turns when sharing ideas with a partner or in a group.	1-5	combinations patterns relationships
1-6	Math Is Ours	Students discuss and decide on classroom norms of interaction for a productive math learning environment.	Students describe actions and behaviors in class using the clause *When we do math....* To optimize output, ELs will participate in MLR5: Co-Craft Questions and Problems.	Students make decisions about classroom norms for working productively with classmates.	1-6	
Unit Review						
Fluency Practice						

Enduring Understandings

See Above

Essential Questions

See Above

Instructional Strategies and Learning Activities

LESSON 1-1

Math Is Mine

Learning Targets

- I can reflect on how I use math.
- I can recognize the skills, behaviors, and attitudes that help me do math.

Standards ◆ Major ▲ Supporting ● Additional

Content

○ **2.OA.C.4** Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

Focus

Content Objective	Language Objectives	SEL Objective
• Students discuss how math is used in their daily lives and in the lives of others. They describe their math story.	• Students ask *What* questions to find out more about interests and opinions related to math. • To optimize the support of sense-making, use MLR8: Discussion Supports.	• Students describe their feelings and attitudes toward mathematics.

Coherence

Previous	Now	Next
• Students identified theirs and others math superpowers.	• Students think about how they and others use math in their lives. They reflect on the mindsets that help them do math.	• Students consider strategies to make sense of problems and decide on possible solution pathways.

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students understand that math is everywhere in their lives.	• Students build proficiency with identifying areas of strength in doing mathematics.	• Students apply their understanding of their math story to target areas of strength in math.

LESSON 1-2

Math Is Exploring and Thinking

Learning Targets

- I can show a problem in different ways.
- I can explain different ways to think about numbers.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **2.NBT.B.5** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Reason abstractly and quantitatively.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students discuss approaches for understanding a problem and strategies for solving it. • Students build proficiency with relating quantities in a problem.	• Students describe the thinking process for solving a math problem using *could* and *might*. • To optimize output, use MLR1: Stronger and Clearer Each Time.	• Students recognize when they feel frustration during math class.

Coherence

Previous	Now	Next
• Students thought about how they and others use math in their lives. They reflected on the mindsets that help them do math.	• Students consider strategies to make sense of problems and decide on possible solution pathways.	• Students explore ways to use mathematics to model real-world situations.

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students demonstrate understanding of the problem solving process, with a focus on making sense of a problem and determining a solution plan.	• Students build proficiency with the problem solving process.	• Students apply their understanding of the problem-solving process as they solve real-world problems.

LESSON 1-3

Math Is In My World

Learning Targets

- I can represent a real-world situation using mathematics.
- I can explain tools I can use to solve a problem.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **2.NBT.A.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.

Math Practices and Processes

MPP Model with Mathematics.

MPP Use appropriate tools strategically.

Focus

Content Objective	Language Objectives	SEL Objective
• Students explore ways to show real-world situations and problems with mathematical models.	• Students explain possible ways to solve a problem using *might*. • To optimize output, use MLR3: Critique, Correct, and Clarify.	• Students show appreciation for the different perspectives of their classmates.

Coherence

Previous	Now	Next
• Students considered strategies to make sense of problems and decided on possible solution pathways.	• Students explore ways to use mathematics to model real-world situations.	• Students consider elements of a viable mathematical argument to defend their thinking or solution.

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students demonstrate understanding of how real-world situations and problems can be modeled with mathematics.	• Students build proficiency with modeling with mathematics.	• Students apply their understanding of modeling with mathematics to model real-world problems with mathematics.

LESSON 1-4

Math Is Explaining and Sharing

Learning Targets

- I can construct an argument to explain my thinking.
- I can explain my thinking with clear and appropriate terms.

Standards ◆ Major △ Supporting ○ Additional

Content

○ **2.MD.C.8** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

Math Practices and Processes

MPP Construct arguments and critique the reasoning of others.

MPP Attend to precision.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students construct arguments to support their thinking. • Students respond to the ideas and arguments of others.	• Students discuss arguments to support their thinking while answering *Wh-* and *Yes/No* questions and using thinking as needed. • To cultivate conversation, use MLR7: Compare and Connect.	• Students practice showing respect for classmates as they share ideas and thinking.

Coherence

Previous	Now	Next
• Students explored ways to use mathematics to model real-world situations.	• Students construct mathematical argument to defend their thinking or solution.	• Students analyze the use of patterns in mathematics. They generate and extend patterns.

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students demonstrate understanding of what constitutes a viable argument and how to critique the arguments of others.	• Students build proficiency with constructing arguments.	• Students apply their understanding of viable arguments to construct arguments to support their solutions and ideas.

LESSON 1-5

Math Is Finding Patterns

Learning Targets

- I can use patterns to develop efficient strategies to solve problems.
- I can explain why patterns are useful to solve problems.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **2.NBT.B.5** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Math Practices and Processes

MPP Look for and make use of structure.

MPP Look for and express regularity in repeated reasoning.

Focus

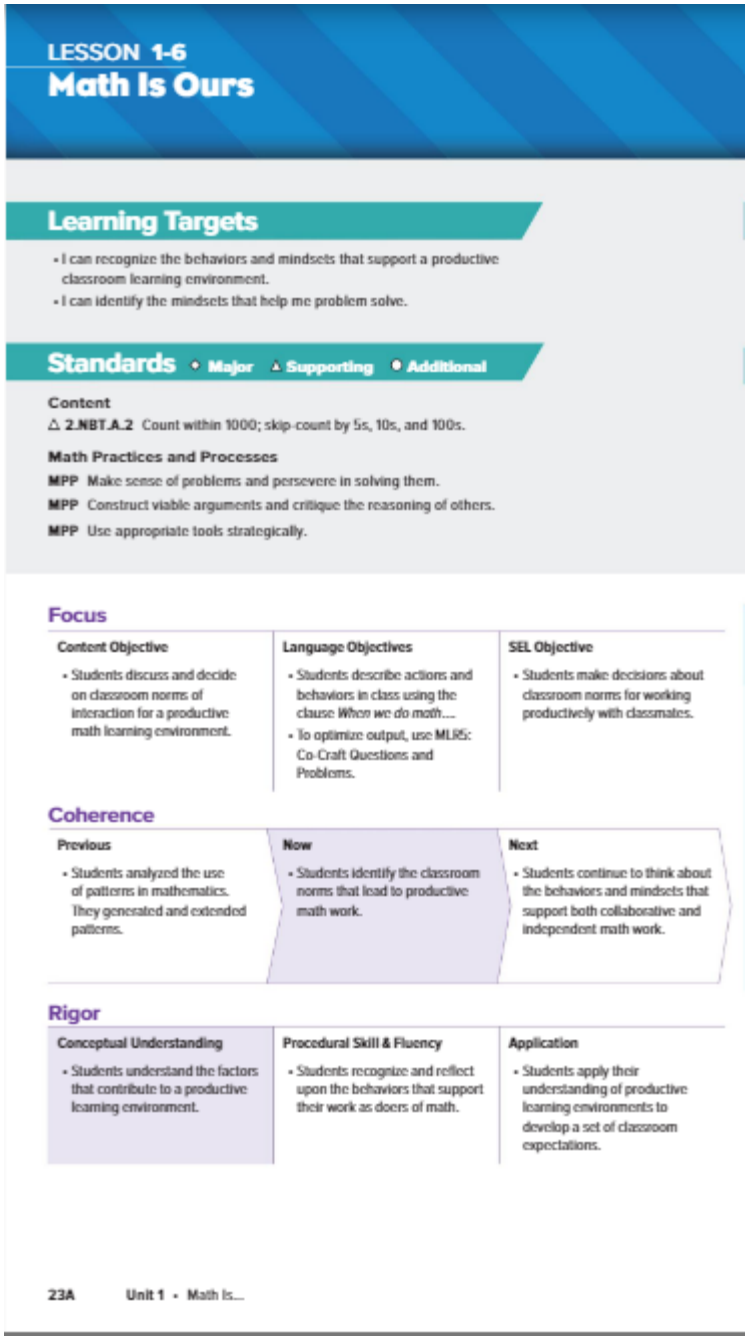
Content Objective	Language Objectives	SEL Objective
• Students explore strategies for uncovering patterns and for using patterns to solve problems.	• Students talk about the usefulness of mathematical patterns using *can*. • To maximize linguistic and cognitive meta-awareness, use MLR2: Collect and Display.	• Students practice self-control as they learn to take turns when sharing ideas with a partner or in a group.

Coherence

Previous	Now	Next
• Students considered elements of a viable mathematical argument to defend their thinking or solution.	• Students analyze the use of patterns in mathematics. They generate and extend patterns.	• Students identify the classroom practices that lead to productive math work.

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students demonstrate understanding of patterns.	• Students build proficiency with describing and analyzing patterns.	• Students apply their understanding of patterns to solve problems.



LESSON 1-6

Math Is Ours

Learning Targets

- I can recognize the behaviors and mindsets that support a productive classroom learning environment.
- I can identify the mindsets that help me problem solve.

Standards ◆ Major △ Supporting ○ Additional

Content

△ **2.NBT.A.2** Count within 1000; skip-count by 5s, 10s, and 100s.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Construct viable arguments and critique the reasoning of others.

MPP Use appropriate tools strategically.

Focus

Content Objective	Language Objectives	SEL Objective
• Students discuss and decide on classroom norms of interaction for a productive math learning environment.	• Students describe actions and behaviors in class using the clause *When we do math....* • To optimize output, use MLR5: Co-Craft Questions and Problems.	• Students make decisions about classroom norms for working productively with classmates.

Coherence

Previous	Now	Next
• Students analyzed the use of patterns in mathematics. They generated and extended patterns.	• Students identify the classroom norms that lead to productive math work.	• Students continue to think about the behaviors and mindsets that support both collaborative and independent math work.

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students understand the factors that contribute to a productive learning environment.	• Students recognize and reflect upon the behaviors that support their work as doers of math.	• Students apply their understanding of productive learning environments to develop a set of classroom expectations.

Integration of Career Readiness, Life Literacies and Key Skills

9.1.2.CR.1	Recognize ways to volunteer in the classroom, school and community.
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).
9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
9.1.2.CR.2	List ways to give back, including making donations, volunteering, and starting a business.
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).

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).
9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
9.1.2.FP.1	Explain how emotions influence whether a person spends or saves.
9.1.2.FP.3	Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).
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).
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.
9.1.2.PB.2	Explain why an individual would choose to save money.
9.4.2.DC.6	Identify respectful and responsible ways to communicate in digital environments.
9.4.2.DC.7	Describe actions peers can take to positively impact climate change (e.g., 6.3.2.CivicsPD.1).
9.4.2.TL.2	Create a document using a word processing application.
9.4.2.TL.5	Describe the difference between real and virtual experiences.
9.4.2.TL.6	Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).
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

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.
8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.1.2.DA.3	Identify and describe patterns in data visualizations.
8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.1.2.AP.4	Break down a task into a sequence of steps.
8.1.2.AP.5	Describe a program’s sequence of events, goals, and expected outcomes.
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.2.OA.C.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
MA.2.NBT.A	Understand place value.
MA.2.NBT.A.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
MA.2.NBT.A.1a	100 can be thought of as a bundle of ten tens — called a “hundred.”
MA.2.NBT.A.1b	The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
MA.2.NBT.A.2	Count within 1000; skip-count by 5s, 10s, and 100s.
MA.3.OA.C	Multiply and divide within 100.
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.
MA.2.NBT.B.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
MA.3.NBT.A.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
MA.2.MD.C.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.