Unit 6 Reveal Grade 2

Content Area: Math

Course(s): Language Arts, Art

Time Period: February
Length: 3 weeks
Status: Published

Unit Overview

UNIT 6 PLANNER Strategies to Fluently Subtract within 100

LESS	ON	MATH OBJECTIVE	LANGUAGE OBJECTIVE	LEARNING OBJECTIVE	LESSON	KEY VOCABULAR
Unit (Opener With Same Differen	ce Explore how age difference	es stay the same over time. Relate this to	a subtraction equation.		
6-1	Strategies to Subtract Fluently within 20	Students subtract fluently within 20.	Students discuss how to subtract fluently within 20 while answering Wh- and Yes/No questions.	Students explore taking different perspectives on approaches to problem solving.	6-1	Math Terms count back count on
6-2	More Strategies to Subtract Fluently within 20	Students subtract fluently within 20.	Students discuss more strategies to subtract fluently within 20 using the verbs make and use.	Students actively listen without interruption as peers describe how they approached a complex mathematical task.	6-2	decompose
6-3	Represent Subtraction with 2-Digit Numbers	Students represent and solve 2-digit subtraction equations that require no regrouping.	Students explain how to solve 2-digit subtraction equations without regrouping while answering Wh- questions.	Students discuss and practice strategies for managing stressful situations.	6-3	difference
6-4	Represent 2-Digit Subtraction with Regrouping	Students represent and solve 2-digit subtraction equations that require regrouping.	Students explain how to solve 2-digit subtraction equations with regrouping while answering Wh-questions.	Students recognize personal strengths through thoughtful self-reflection.	6-4	regroup
6-5	Use a Number Line to Subtract	Students use a number line to subtract.	Students talk about how to use a number line to subtract while answering Wh- questions.	Students identify and discuss the emotions experienced during math learning.	6-5	number line
6-6	Decompose Numbers to Subtract	Students decompose one number by place value to subtract 2-digit numbers.	Students talk about decomposing by place value to subtract while using the term difference.	Students collaborate with peers to complete a mathematical task and offer constructive feedback.	6-6	decompose place value
6-7	Adjust Numbers to Subtract	Students adjust numbers to subtract.	Students explain how to adjust numbers to subtract using must.	Students identify a problem and use creativity to identify solutions.	6-7	adjust friendly numbers
Math	Probe Subtraction Strategic	s Students determine if a give	en strategy is a correct approach to perfor	m 2-digit subtraction.		
6-8	Relate Addition to Subtraction	Students use addition to solve 2-digit subtraction equations.	Students explain how to use addition to solve 2-digit subtraction equations while answering Wh- questions.	Students set learning goals and initiate work on tasks to accomplish their goals.	6-8	related facts
6-9	Solve One-Step Problems Using Subtraction	Students solve one-step word problems within 100.	Students discuss solving one-step word problems within 100 while answering Wh- questions.	Students identify personal traits that make them good students, peers, and math learners.	6-9	adjust decompose
6-10	Solve Two-Step Problems Using Subtraction	Students solve two-step word problems within 100.	Students talk about solving two-step word problems using would and could.	Students discuss the value of hearing different viewpoints.	6-10	adjust decompose
	Review cy Practice					
Unit /	Assessment rmance Task					

Essential Questions

See Above

Instructional Strategies and Learning Activities

LESSON 6-1 Strategies to Subtract Fluently within 20 **Learning Targets** - I can count on and count back to subtract within 20. - I can explain how to count on and count back to subtract within 20. Standards + Major A Supporting • Addition O 2.0A.B.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. Math Practices and Processes MPP Reason abstractly and quantitatively. MPP Model with mathematics. Focus Content Objective Language Objectives SEL Objective - Students subtract fluently - Students discuss how to · Students explore taking subtract fluently within 20 within 20. different perspectives on while answering Wh- and approaches to problem solving. Yes/No questions. To support cultivating conversation and sense-making, ELs will participate in MLR1: Stronger and Clearer Each Time. Coherence · Students used strategies to - Students use the count on · Students learn more strategies strategy to find a difference within 20. subtract within 20 (Grade 1). to fluently subtract within 20 (Unit 6). - Students added fluently within Students use the count back strategy to find a difference 20 (Unit 5). · Students solve two-step word problems with four operations (Grade 3). Rigor Conceptual Understanding Procedural Skill & Fluency Application · Students understand how Students subtract within 20 by · Students solve real-world counting on and counting back counting on and counting back, problems by counting on and can help them develop fluency leading to fluency with counting back to subtract. with subtraction facts within 20. subtraction facts within 20. element of rigor for this standard.

More Strategies to Subtract Fluently within

Learning Targets

- I can make a 10 and use addition to subtract within 20.
- I can explain how to subtract within 20 by making a 10 or using addition.

Standards • Major A Supporting • Additional

Content

2.0A.B.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Model with mathematics.

Focus

Content Objective

 Students subtract fluently within 20.

Language Objectives

- Students discuss more strategies to subtract fluently within 20 using the verbs make and use.
- To support optimizing output, ELs will participate in MLR7: Compare and Connect.

SEL Objective

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

Coherence

Previou

- Students used strategies to subtract within 20 (Grade 1).
- Students added fluently within 20 (Unit 5).

Now

- Students use the make a 10 strategy to find a difference within 20.
- Students use addition to find a difference within 20.

Next

- Students represent and solve 2-digit subtraction equations that do not require regrouping (Unit 6).
- Students solve two step word problems with four operations (Grade 3).

Rigor

Conceptual Understanding

 Students understand how make a 10 and addition can help them develop fluency with subtraction facts within 20.

Procedural Skill & Fluency

 Students subtract within 20 by making a 10 and using addition, leading to fluency with subtraction facts within 20.

Application

 Students solve real-world problems by making a 10 and using addition to subtract.

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

205A

Represent Subtraction with 2-Digit Numbers

Learning Targets

- I can subtract 2-digit numbers.
- . I can represent subtracting 2-digit numbers.

Standards • Major A 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 Model with mathematics.

MPP Use appropriate tools strategically.

Focus

Content Objective

- Students represent and solve
 2-digit subtraction equations that require no regrouping.
- Language Objectives
- Students explain how to solve 2-digit subtraction equations without regrouping while answering Wh- questions.
- To support maximizing linguistic and cognitive meta-awareness and optimizing output, ELs will participate in MLR3: Critique, Correct, and Clarify.

SEL Objective

 Students discuss and practice strategies for managing stressful situations.

Coherence

Previou

- Students used strategies to subtract within 20 (Grade 1).
- Students subtracted fluently within 20 (Unit 6).

Now

 Students use strategies to represent and solve 2-digit subtraction equations that require no regrouping.

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- Students represent and solve 2-digit subtraction equations that require regrouping (Unit 6).
- Students solve two-step word problems with four operations (Grade 3).

Rigor

Conceptual Understanding

 Students understand the relationship between place value and subtracting 2-digit numbers without regrouping.

Procedural Skill & Fluency

 Students represent and solve subtraction problems with 2-digit numbers without regrouping using tools such as base-ten blocks and number charts.

Application

 Students solve real-world problems by subtracting 2-digit numbers without regrouping.

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

209A

Represent 2-Digit Subtraction with Regroupi

Learning Targets

- I can subtract 2-digit numbers with regrouping.
- . I can represent 2-digit subtraction with regrouping.

Standards • Major A 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 Reason abstractly and quantitatively.

MPP Look for and make use of structure.

Focus

Content Objective

 Students represent and solve
 2-digit subtraction equations that require regrouping.

Language Objectives

- Students explain how to solve 2-digit subtraction equations with regrouping while answering Wh- questions.
- To support sense-making, ELs will participate in MLR6: Three Reads.

SEL Objective

 Students recognize personal strengths through thoughtful self-reflection.

Coherence

Previous

- Students used strategies to subtract within 20 (Grade 1).
- Students represented and solved 2-digit subtraction equations that require no regrouping (Unit 6).

Now

 Students represent 2-digit subtraction equations that require regrouping and solve these equations.

Next

- Students use a number line to subtract (Unit 6).
- Students solve two-step word problems with four operations (Grade 3).

Rigor

Conceptual Understanding

 Students understand the relationship between place value and subtracting 2-digit numbers with regrouping.

Procedural Skill & Fluency

 Students represent and solve subtraction problems with 2-digit numbers with regrouping using tools such as base-ten blocks and number charts.

Application

 Students solve real-world problems by subtracting 2-digit numbers with regrouping.

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

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Use a Number Line to Subtract

Learning Targets

- . I can use a number line to subtract.
- I can explain how to use a number line to subtract.

Standards • Major • Supporting • Additional

Content

2.MD.8.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

MPP Use appropriate tools strategically.

Focus

Content Objective

 Students use a number line to subtract.

Language Objectives

- Students talk about how to use a number line to subtract while answering Wh- questions.
- To support cultivating conversation and optimizing output, ELs will participate in MLR8: Discussion Supports.

SEL Objective

 Students identify and discuss the emotions experienced during math learning.

Coherence

Previous

- Students used strategies to subtract within 20 (Grade 1).
- Students represented and solved 2-digit subtraction equations (Unit 6).

Now

 Students subtract 2-digit numbers using a number line.

Next

- Students decompose one number by place value to subtract 2-digit numbers (Unit 6).
- Students solve two-step word problems with four operations (Grade 3)

Rigor

Conceptual Understanding

 Students understand how to use a number line to subtract 2-digit numbers.

Procedural Skill & Fluency

 Students represent and solve subtraction problems with 2-digit numbers using a number line.

Application

 Students solve real-world problems by subtracting 2-digit numbers using a number line.

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

Decompose Numbers to Subtract

Learning Targets

- . I can decompose 2-digit numbers to help me subtract.
- . I can explain how to decompose 2-digit numbers to make subtracting friendlier.

Standards • Major A 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 Construct viable arguments and critique the reasoning of others.

MPP Make sense of problems and persevere in solving them.

Focus

Content Objective

 Students decompose one number by place value to subtract 2-digit numbers.

Language Objectives

- Students talk about decomposing by place value to subtract while using the term difference.
- To support maximizing linguistic and cognitive meta-awareness, ELs will participate in MLRS: Co-Craft Questions and Problems.

SEL Objective

 Students collaborate with peers to complete a mathematical task and offer constructive feedback to the mathematical ideas posed by others.

Coherence

Previous

- Students used strategies to subtract within 20 (Grade 1).
- Students used a number line to subtract (Unit 6).

Now

 Students subtract 2-digit numbers by decomposing one number by place value.

Next

- Students decompose 3-digit numbers to subtract (Unit 10).
- Students solve two-step word problems with four operations (Grade 3).

Rigor

Conceptual Understanding

 Students understand how and why decomposing numbers can make subtraction with 2-digit numbers simpler.

Procedural Skill & Fluency

 Students develop proficiency subtracting 2-digit numbers by decomposing one number.

Application

 Students solve application problems by decomposing to subtract.

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

LESSON 6-7 Adjust Numbers to Subtract

Learning Targets

- . I can adjust and subtract 2-digit numbers.
- . I can explain how to adjust 2-digit numbers for friendlier subtraction.

Standards • Major A Supporting • Additional

Content

Q.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 Construct viable arguments and critique the reasoning of others.

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objective

 Students adjust numbers to subtract.

Language Objectives

- Students explain how to adjust numbers to subtract using must.
- To support sense-making and optimizing output, ELs will participate in MLR7: Compare and Connect.

SEL Objective

 Students identify a problem, use creativity to execute problem-solving steps, and identify multiple solutions.

Coherence

Previous

- Students mentally subtracted 10 from a 2-digit number without counting (Grade 1).
- Students decomposed numbers to subtract (Unit 6).

Now

 Students subtract 2-digit numbers by adjusting numbers.

Next

- Students adjust numbers to subtract 3-digit numbers (Unit 10).
- Students solve two-step word problems with 4 operations (Grade 3).

Rigor

Conceptual Understanding

 Students understand how and why adjusting numbers can make subtraction with 2-digit numbers easier.

Procedural Skill & Fluency

 Students develop proficiency subtracting 2-digit numbers by adjusting numbers in different ways.

Application

 Students adjust numbers to solve subtraction application problems.

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

LESSON 6-8 Relate Addition to Subtraction

Learning Targets

- . I can use addition to solve 2-digit subtraction equations.
- . I can explain how to use addition to solve 2-digit subtraction equations.

Standards • Major A 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 Reason abstractly and quantitatively.

MPP Look for and make use of structure.

Focus

Content Objective

 Students use addition to solve 2-digit subtraction equations.

Language Objectives

- Students explain how to use addition to solve 2-digit subtraction equations while answering Wh-questions.
- To support optimizing output, ELs will participate in MLR4: Info Gap.

SEL Objective

 Students set learning goals and initiate work on tasks to accomplish their goals.

Coherence

Province

- Students used strategies to subtract within 20 (Grade 1).
- Students adjusted numbers to subtract (Unit 6).

Now

 Students solve 2-digit subtraction equations using known addition facts.

Next

- Students solve 1-step subtraction word problems (Unit 6).
- Students solve two-step word problems with four operations (Grade 3).

Rigor

Conceptual Understanding

 Students understand how and why using addition to solve 2-digit subtraction equations can make subtraction with 2-digit numbers easier.

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

Procedural Skill & Fluency

 Students develop proficiency subtracting 2-digit numbers by using a related addition equation.

Procedural skill & fluency is not a targeted element of rigor for this standard.

Application

 Students solve subtraction application problems using the related addition equation with an unknown addend.

231A

Solve One-Step Problems Using Subtraction

Learning Targets

- . I can use subtraction strategies to solve one-step problems.
- . I can explain how to solve one-step problems using subtraction.

Standards • Major A Supporting • Additional

Content

• 2.0A.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Model with mathematics.

Focus

Content Objective

 Students solve one-step word problems within 100.

Language Objectives

- Students discuss solving onestep word problems within 100 while answering Wh- questions.
- To support sense-making and optimizing output, ELs will participate in MLR2: Collect and Display.

SEL Objective

 Students identify personal traits that make them good students, peers, and math learners.

Coherence

Previous

- Students subtracted within 20 to solve word problems (Grade 1).
- Students used various strategies to subtract numbers within 100 (Unit 6).

Now

 Students solve one-step word problems using subtraction within 100.

Next

- Students solve two-step word problems using subtraction within 100 (Unit 6).
- Students solve two-step word problems with four operations (Grade 3).

Rigor

Conceptual Understanding

 Students use their understanding of subtraction strategies while solving one step problems.

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

Procedural Skill & Fluency

 Students use tools and strategies as they solve one step word problems involving subtraction.

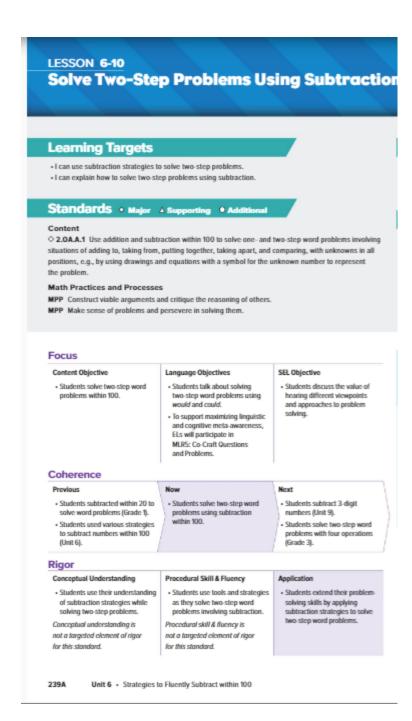
Procedural skill & fluency is

Procedural skill & fluency is not a targeted element of rigor for this standard.

Applicatio

 Students extend their problemsolving skills by applying subtraction strategies to solve one-step word problems.

235A



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.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.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.Cl.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.L.2.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.W.2.5	With guidance and support from adults and peers, focus on a topic and strengthen writing as needed through self-reflection, revising and editing.
LA.RI.2.1	Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
LA.RI.2.2	Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
LA.RI.2.3	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
LA.RI.2.4	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

LA.RI.2.5	Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
LA.RI.2.6	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
LA.RI.2.7	Explain how specific illustrations and images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
LA.RI.2.8	Describe and identify the logical connections of how reasons support specific points the author makes in a text.
LA.RI.2.9	Compare and contrast the most important points presented by two texts on the same topic.
LA.RI.2.10	Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.
LA.SL.2.1	Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

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.
- o Process how the student will acquire the content information.
- o 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:

Exit Ticket: Use Data to Inform Differentiation

Every lesson closes with an Exit Ticket. Differentiation recommendations reside in the Teacher Edition to make the Exit Ticket data actionable.

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Modifications and Accommodations

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.A.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
MA.2.OA.B.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.