NEW MEXICO

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The NMIS is a teacher-influenced tool, designed to provide instructional planning support at the programmatic level for districts and instructional level for teachers. Its foundation stems from the vision and mission of the PED and came into existence to assure that students in NM will be engaged in a culturally and linguistically responsive educational system that meets the social, emotional, and academic needs of ALL students. This is also rooted in the belief that all students must have access to on-grade-level standards, focusing on acceleration. The purpose of this tool is to help educators understand each of the grade level standards and how those standards connect to the students' overall preparation for college and career readiness.

Standards are defined as the most critical prerequisite skills and knowledge. This document is color-coded to reflect both anchor and priority standards. Though previous emphasis was placed on priority standards to address lost learning due to COVID-19, New Mexico teachers should note that moving forward, while priority standards allow for acceleration of learning, **all** standards should be addressed in instruction throughout the school year.

In this guide you will find:
- A breakdown of each of the grade level standards within the cluster, including:
    - Standards of Mathematical Practice
    - Common Misconceptions
    - Identification of Priority Standards, as identified by NMPED.
    - Level of Rigor Identification
- Sample aligned assessment items
- Suggested Student Discourse Guide **(only provided for clusters with Conceptual Understanding standards)**
- A multilayered system of supports (MLSS) and culturally and linguistically responsive instruction (CLR) guide

Key		
	Priority Standard	Priority standards, as identified by NMPED, are denoted with red highlighting. Priority standards are the most critical prerequisite skills and knowledge a student needs. This does not mean that these are only standards required to be taught, just these are the standards that will allow for the acceleration the students of New Mexico need during this time.
	Conceptual Understanding	Conceptual Understanding standards help students build a deep understanding of the **how** and **why** of mathematics.
	Application	Application standards help students identify the appropriate concepts and skills to tackle **novel real-world problems.**
	Procedural Skill and Fluency	Procedural standards help students develop **efficiency** and **accuracy** in computations.

Standards Breakdown

- Extend the counting sequence.
  - 1.NBT.A.1
- Understand Place Value.
  - 1.NBT.B.2
  - 1.NBT.B.3
- Use place value understanding and properties to add and subtract.
  - 1.NBT.C.4
  - 1.NBT.C.5
  - 1.NBT.C.6

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Grade	CCSS Domain	CCSS Cluster
1	**Number and Operations in Base Ten**	**Extend the Counting Sequence**

📋 Cluster Standard: 1.NBT.A.1

Standard	Standards for Mathematical Practice
Count to 120, starting at any number less than 120. In this range, read and write numerals and represent several objects with a written numeral.	● **SMP 6:** Attend to precision. ● **SMP 7:** Look for and make use of structure.
Clarification Statement	**Students Who Demonstrate Understanding Can...**
● Students build on their counting to 100 by ones and tens and start a count at any number less than 120 and continue to 120. Students should be able to count and represent their counting in many ways; hundred charts and number lines are useful tools.	● Count to 120. ● Count to 120 starting at any number. ● Read any number name up to 120. ● Write any numeral up to 120. ● Label a set of objects up to 120 with a written numeral.
DOK	**Blooms**
1-2	Remember and Apply

Common Misconceptions

● Students may reverse digits in writing numerals and believe that 24 and 42 have the same value.

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Grade	CCSS Domain	CCSS Cluster
1	**Number and Operations in Base Ten**	**Understand Place Value.**

🧠 Cluster Standard: 1.NBT.B.2

Standard	Standards for Mathematical Practice
Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: • 1.NBT.B.2.A: 10 can be thought of as a bundle of ten ones — called a "ten." • 1.NBT.B.2.B: The numbers from 11 to 19 are composed of ten and one, two, three, four, five, six, seven, eight, or nine ones. • 1.NBT.B.2.C: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	• **SMP 4:** Model with mathematics. • **SMP 7:** Look for and make use of structure.

Clarification Statement	Students Who Demonstrate Understanding Can...
• More generally, first graders learn that the two **digits** of a **two-digit number** represent amounts of **tens** and **ones**, e.g., 67 represents 6 tens and 7 ones. Saying 67 as "6 tens, 7 ones" as well as "sixty-seven" can help students focus on the tens and ones structure of written **numerals**.	• Represent 10 as ten ones. • Represent numbers 11 to 19 as a ten and some ones. • Represent two-digit numbers using physical tools, drawings, and number names (2 tens is 20, 2 tens and 7 ones is 27). • Explain the value of each digit in a two-digit number (place value). • Locate a two-digit number on a hundred chart and number line.

DOK	Blooms
2	Apply and Analyze

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Grade	CCSS Domain	CCSS Cluster
1	**Number and Operations in Base Ten**	**Understand Place Value**

Cluster Standard: 1.NBT.B.3

Standard	Standards for Mathematical Practice
Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	• **SMP 4:** Model with mathematics.. • **SMP 6:** Attend to precision.

Clarification Statement	Students Who Demonstrate Understanding Can...
• Grade 1 students use their **base-ten** work to help them recognize that the digit in the **tens place** is more important for determining the size of a two-digit number. Correctly placing the **<** and **>** **symbols** is a challenge for early learners. Accuracy can improve if students think of putting the wide part of the symbol next to the **larger** number.	• Determine when a two-digit number is greater than, less than, or equal to another two-digit number. • Explain why a two-digit number is greater than, less than, or equal to another two-digit number using physical models, hundred charts, number lines, and drawings. • Compare two two-digit numbers using place value understanding. • Record the comparison using the symbols >, <, and =.

DOK	Blooms
2	Apply and Analyze

Common Misconceptions

• Students may count tens and ones separately, such as 10, 20, 1, 2, 3 instead of 10, 20, 21, 22, 23.	• Students may not recognize that in two-digit numbers the position of the digit determines its value.

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Grade	CCSS Domain	CCSS Cluster
1	**Number and Operations in Base Ten**	**Use place value understanding and properties to add and subtract.**

Cluster Standard: 1.NBT.C.4

Standard	Standards for Mathematical Practice
Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	● **SMP 2:** Reason abstractly and quantitatively. ● **SMP 4:** Model with mathematics.

Clarification Statement	Students Who Demonstrate Understanding Can...
● Students may explain their reasoning by saying that they have **one more** or **one less ten** than before.	● Explain addition within 100 adding a two-digit number and a one-digit number using physical models, drawings, hundred charts, and number lines. ● Explain addition within 100 adding a two-digit number and a multiple of ten using physical models, drawings, hundred charts, and number lines. ● Explain addition within 100 adding a two-digit number and a two-digit number using physical models, drawings, hundred charts, and number lines. ● Use partial sums by decomposing both addends to add within 100. ● Use partial sums by decomposing one addend to add within 100. ● Explain why a new ten is sometimes made when adding numbers.

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DOK	Blooms
1-3	Understand, Apply, Analyze, and Evaluate

Grade	CCSS Domain	CCSS Cluster
1	**Number and Operations in Base Ten**	**Use place value understanding and properties to add and subtract.**

Cluster Standard: 1.NBT.C.5

Standard	Standards for Mathematical Practice
Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	**SMP 3**: Construct viable arguments and critique the reasoning of others. **SMP 8:** Look for and express regularity in repeated reasoning.

Clarification Statement	Students Who Demonstrate Understanding Can...
Students may explain their reasoning by saying that they have **one more** or **one less ten** than before.	- Determine 10 more and 10 less of any two-digit number using a physical tool, hundred charts, and number lines. - Recall 10 more for any two-digit number (e.g., 32 + 10 = 42) without using a tool or representation. - Recall 10 less for any two-digit number (e.g., 32 - 10 = 22) without using a tool or representation. - Explain why the tens digit changes and why the ones place does not change when finding ten more or ten less.

DOK	Blooms
1-2	Remember, Understand, Apply, and Analyze

Grade	CCSS Domain	CCSS Cluster
1	**Number and Operations in Base Ten**	**Use place value understanding and properties to add and subtract.**

Cluster Standard: 1.NBT.C.6

Standard	Standards for Mathematical Practice
Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	● **SMP 3:** Construct viable arguments and critique the reasoning of others. ● **SMP 7:** Look for and make use of structure.

Clarification Statement	Students Who Demonstrate Understanding Can...
● **Differences** of **multiples** of 10, such as 70 – 40 can be viewed as 7 **tens minus** 4 tens and represented with **concrete models** such as objects **bundled** in tens or drawings. Children use the relationship between **subtraction** and **addition** when they view 80 – 70 as an **unknown addend addition problem**, 70 + <box> = 80, and reason that 1 ten must be **added** to 70 to make 80, so 80 –70 = 10.	● Determine the difference of two multiples of 10 (e.g. 90 - 40) using models, drawings, hundred charts, and number lines. ● Subtract a multiple of 10 from a multiple of 10. (e.g., subtract 90 - 40). ● Explain the difference between two multiples of 10 by relating it to subtracting the tens digit. ● Explain why the ones place does not change when subtracting multiples of 10.

DOK	Blooms
1-2	Remember, Understand, Apply, and Analyze

Common Misconceptions

- Students may subtract the digits in the tens place but ignore the value of the ones place.

Student Discourse Guide

- **Purposeful, rich classroom discourse offers students the opportunity to express their ideas, thinking, and to critique the reasoning of others in a variety of ways (writing, drawing, verbal). Purposeful implementation of classroom discourse allows students to activate funds of knowledge and to refine their mathematical understanding. When students have frequent opportunities for discourse they find various paths to solutions and reveal knowledge or misunderstandings to educators. The process also allows educators to honor students' culture, lived experiences and evolving math identities.**
- **Discourse that focuses on tasks that promote reasoning and problem solving is a primary mechanism for developing conceptual understanding and meaningful learning of mathematics (Michaels, O'Connor, and Resnick, 2008)**

Domain: **Number & Operations in Base 10**	Strand: **Understand Place Value**

Suggested Student Discourse Questions

- What do the names of the place values mean? (ones, tens) What does it mean when you have greater than, less than or equal to? - How did (students name) show the number 27 using base ten.	- How many tens and ones are in one dozen eggs? - Discuss with a partner how many 10s and 1s are in the number 55.

Domain: **Number & Operations in Base 10**	Strand: **Use place value understanding and**

	properties of operations to add and subtract.
Suggested Student Discourse Questions	

- How can you add 10 more to the number 65? How can you subtract 10 less from the number 65?
- How did (students name) add 10 more to the number 65? How did (students name) subtract 10 less from the number 65?

- Team A scores 45 points and Team B scores 65 points. How many less points did Team A score?
- Explain why the 1s place does not change when subtracting ten?

ASSESSMENT GUIDE

- [Extend the counting sequence](#)
- [Understand Place Value](#)
- [Use place value understanding and properties to add and subtract](#)

Grade	*CCSS Domain*	*CCSS Strand*
1	**Number and Operations in Base Ten**	**Extend the counting sequence**
	Sample Task #1 (Constructed Response)	

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Circle the numbers that make ten.
Draw a picture, and complete the number sentences to solve.

1. 8 + 2 + 3 = _____

_____ + _____ = _____

10 + _____ = _____

Sample Task #2

1.
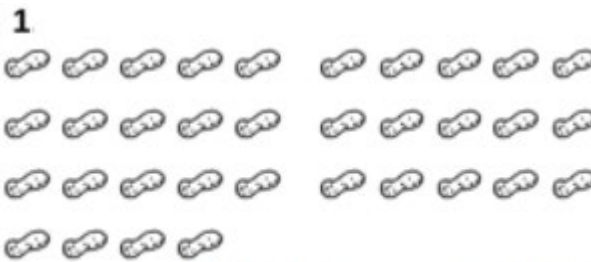
There are _____ peanuts.

Grade	CCSS Domain	CCSS Strand
1	**Number and Operations in Base Ten**	**Understand Place Value**
	Sample Task #1 (Constructed Response)	

Solve the problems. Write your answers to show how many **tens** and **ones**. If there is only 1 ten, cross off the "s."

Add.

$8 + 7 =$ ☐ ☐

_____ tens and _____ ones

Sample Task #2
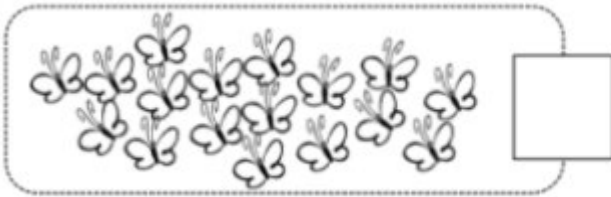
is the same as

_____ ones and _____ ten.

Grade	CCSS Domain	CCSS Strand
1	**Number and Operations in Base Ten**	**Use place value understanding and properties of operations to add and subtract**

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Sample Task #1 (Constructed Response)

Solve on your own. Show your thinking by drawing or writing.
Write a statement to answer the question.

There were 12 sugar cookies in the box. My friend and I ate 5 of them. How many cookies are left in the box?

Sample Task #2

Complete the subtraction sentences by using either the count on or take from ten strategy. Tell which strategy you used.

17 - 9 = ____

☐ take from ten
☐ count on

_____

MLSS AND CLR GUIDE

- Extend the counting sequence
- Understand Place Value
- Use place value understanding and properties to add and subtract

CCSS Domain	CCSS Cluster
Number and Operations in Base Ten	Extend the counting sequence

Culturally and Linguistically Responsive Instruction

Relevance to Families and Communities	During a unit focused on extending the counting sequence, consider options for learning from your families and communities the cultural and linguistic ways this mathematics exists outside of school to create stronger home to school connections for students, students make connection of number sense by counting objects within 120, counting to

	100 is easier than counting to 120 because of number sense. "What number comes after 100?"
Cross-Curricular Connections	Social Studies: In first grade, the New Mexico Social Studies Standards state students should "describe different ways to determine a decision (e.g., majority rule, consensus, authoritarian [parent, teacher, principal])". Consider providing a connection for students to have 120 people or less (maybe the entire first grade) vote on something and then count the votes. Classroom Jobs (or other similar routine): Consider providing a connection to counting or taking inventory of various items around the classroom.
Validate/Affirm/Build/ Bridge	● *How can you design your mathematics classroom to intentionally and purposefully legitimize the home culture and languages of students and reverse the negative stereotypes regarding the mathematical abilities of students of marginalized cultures and languages?* ● *How can you create connections between the cultural and linguistic behaviors of your students' home culture and language, the culture and language of school mathematics to support students in creating mathematical identities as capable mathematicians that can use mathematics within school and society?*	● Building Procedural Fluency from Conceptual Understanding: Instruction should build from conceptual understanding to allow students opportunities to make meaning of mathematics before focusing on procedures. When new learning begins with procedures it privileges those with strong prior familiarity with school mathematics procedures for solving problems and does not allow learning to build for more methods for solving tasks that occur outside of school mathematics. For example, when studying extending the counting sequence the types of mathematical tasks are critical because students need to be able to count on or backwards from any given number as they get into higher grades. It is important for students to be fluent and have a good understanding of the order of numbers. Students can also count in their home language, if possible.

Planning for Multi-Layered System of Supports

Vertical Alignment

Previous Learning	Current Learning	Future Learning

1st Grade Number and Operations in Base Ten Guide

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● Connect to counting from 1 to100 by ones and tens beginning with any number and reading, writing and representing objects with a range of numbers from 0-20. **(K.CC.1-3)**	● Connect to understanding that the two-digits in the two-digit number represent tens and ones. **(1.NBT.2)**	● Connect to skip counting within 1000 (by 5s,10s and 100s) and using base ten numerals, number names, and expanded form to read and write numbers within 1000. **(2.NBT.1-3)**

Suggested Instructional Strategies

Pre-Teach

Level of Intensity	*Essential Question*	*Examples*
Targeted	*What pre-teaching will prepare students to productively struggle with the mathematics for this cluster within your HQIM?*	For example, some learners may benefit from targeted pre-teaching that introduces new representations (e.g., number lines or number chart) when studying extending the counting sequence because students will be exposed to the written and oral representation of counting on from any given number to 120. Also, students are expected to represent several objects with the written form.
Intensive	*What critical understandings will prepare students to access the mathematics for this cluster?*	K.CC.A.1 This standard provides a foundation for work with extending the counting sequence because students begin to count forward to 100 by ones and tens. If students have unfinished learning within this standard, based on assessment data, consider ways to provide intensive pre-teaching support prior to the start of the unit to ensure students are ready to access grade level instruction and assignments.

Universal Support Framework

A student should know/understand...	A student should be able to do...	*Potential Scaffolds*

● There is an order to numbers (sequence) when counting.
● A number represents a given amount of objects.
● The place of a digit determines its value.
	● Count on from any given number in the range 0-120.
	● Read and write numerals to 120.
		● Build on students' experience with the following skills:
		  ○ Model how to use a hundreds chart to sequence numbers up to 120.
		  ○ Model how to read numbers within 120.
		  ○ Give students multiple opportunities to practice writing numbers in sequence to 120.
		  ○ Model how to find a given number on a hundreds chart and count on or back from that number.
		  ○ Show students the pattern on a hundreds chart for 10 more or 10 less.
		  ○ Show students how numbers 10 + are composed of a group of ten and some more.
		
		● Cognitive Strategies
		  ○ Repeatedly model the strategies.
		  ○ Monitor the students' use of the strategies.
		  ○ Provide feedback to students
		  ○ Teach self-questioning and self-monitoring strategies.
		  ○ Introduce multiple means of representation for mathematical ideas.
		
		● Encourage students to use alternative tools to better access the grade level content. Examples include:
		  ○ Digital or hands on manipulatives: two colored counters, linking cubes, base ten blocks, bears, ten frame counters, beans, straws, subitizing cards, beads, number bonds, dice, dominoes, playing cards, student balance, hundreds chart, etc...
		  ○ Digital resources from math programs or online resources for counting, comparing, addition, and subtraction practice.

1st Grade Number and Operations in Base Ten Guide

Re-Teach		
Level of Intensity	*Essential Question*	*Examples*
Targeted	What formative assessment data (e.g., tasks, exit tickets, observations) will help identify content needing to be revisited during a unit?	For example, students may benefit from re-engaging with content during a unit that focuses on extending the counting sequence by providing specific feedback to students on their work through a short mini-lesson because as students are able to give feedback to other students, then they are able to do some critical thinking to determine where there might have been an error as the students was counting from any given number.
Intensive	What assessment data will help identify content needing to be revisited for intensive interventions?	For example, some students may benefit from intensive extra time during and after a unit extending the counting sequence by offering opportunities to understand and explore different strategies because students need to be exposed to multiple opportunities to be able to get a concrete understanding of counting on from any given number. It would be helpful to provide students with a number chart or number line to provide visual support.

Extension	
Essential Question	*Examples*
What type of extension will offer additional challenges to 'broaden' your student's knowledge of the mathematics developed within your HQIM?	For example, some learners may benefit from an extension such as open-ended tasks linking multiple disciplines when studying extending the counting sequence because an open-ended task would allow students more practice to become more fluent with counting on from any given number.

CCSS Domain	*CCSS Cluster*
Number and Operations in Base Ten	**Understand place value**
Culturally and Linguistically Responsive Instruction	

Relevance to Families and Communities	During a unit focused on understanding place value, consider options for learning from your families and communities the cultural and linguistic ways this mathematics exists outside of school to create stronger home to school connections for students, students can make the connection that two two-digit numbers have ones and tens, so 5 tens and 4 ones is 54. Families can play "I spy" number game. Make connections with two two-digit numbers, use vocabulary words greater than, less than, and equal to instead of bigger or smaller numbers. Connect the vocabulary words with the symbol greater than >, less than <, and equal to = whenever possible.
Cross-Curricular Connections	Science: In first grade the NGSS state students should "make observations at different times of year to relate the amount of daylight to the time of year." Consider providing a connection for students to compare the number of hours of daylight during different times of the year. Art: Even though there is a difference between illustrating or drawing and pictorial representation in math, students do need significant experience with concrete representations to develop the idea of place value. Consider providing a connection where they can create pictures that include groups of ten objects together and then single ones (such as a bouquet of flowers and single flowers or a bunch of balloons and single balloons).
Validate/Affirm/Build/ Bridge	● *How can you design your mathematics classroom to intentionally and purposefully legitimize the home culture and languages of students and reverse the negative stereotypes regarding the mathematical abilities of students of marginalized cultures and languages?* ● *How can you create connections between the cultural and linguistic behaviors of your students' home culture and language, the culture and language of school mathematics to support students in creating mathematical identities as capable mathematicians that can*	● Building Procedural Fluency from Conceptual Understanding: Instruction should build from conceptual understanding to allow students opportunities to make meaning of mathematics before focusing on procedures. When new learning begins with procedures it privileges those with strong prior familiarity with school mathematics procedures for solving problems and does not allow learning to build for more methods for solving tasks that occur outside of school mathematics. For example, when studying understanding place value, the types of mathematical tasks are critical because students need to have a strong understanding of place value before they begin to use numbers procedurally. It is important to utilize manipulatives when building a student's understanding of place value, so they can visually see the concept as well. Engage students in learning by building on their experiences and provide multiple options for how students can interact with instructional content. Use consistent spoken and body language with all students to avoid unconscious bias in verbal or nonverbal cues. A teacher randomly draws from popsicle sticks with student names when asking questions. This ensures all students have an

	use mathematics within school and society?	equal chance of participating in the whole class discussion.

Planning for Multi-Layered System of Supports

Vertical Alignment

Previous Learning	*Current Learning*	*Future Learning*
● Connect to composing and decomposing using ten ones and some more ones. **(K.NBT.1)** ● Connect to working with values between 1 and 10 and identifying whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, as well as comparing two numbers between 1 and 10. **(K.CC.6-7)**	● Connect to applying place value strategies of breaking apart numbers into tens and ones to help with adding and subtracting within 100. **(1.NBT.4,6)** ● Connect to using the concept of tens and ones to mentally find 10 more or 10 less. **(1.NBT.5)**	● Connect to applying place value concepts to a larger range of numbers to include numbers to 1000. **(2.NBT.1-4)**

Suggested Instructional Strategies

Pre-Teach

Level of Intensity	*Essential Question*	*Examples*
Targeted	*What pre-teaching will prepare students to productively struggle with the mathematics for this cluster within your HQIM?*	For example, some learners may benefit from targeted pre-teaching that provides additional time for confusion to happen with new mathematical ideas when studying understanding place value because place value is a foundational skill that students need to have a strong understanding, so allowing students time to explore any confusions would help them to clear up those confusions and build a deeper understanding of place value.

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Intensive	*What critical understandings will prepare students to access the mathematics for this cluster?*	K.NBT. A.1: This standard provides a foundation for work with understanding place value because students begin to decompose numbers from 11 to 19 into tens and ones. If students have unfinished learning within this standard, based on assessment data, consider ways to provide intensive pre-teaching support prior to the start of the unit to ensure students are ready to access grade level instruction and assignments.

Universal Support Framework		
A student should know/understand...	A student should be able to do...	*Potential Scaffolds*
- A group of 10 ones is a unit called a "ten". - The numbers from 11-19 are composed of a group of ten and 1,2,3,4,5,6,7,8,9 more. These quantities are represented by the two-digits of a two-digit number. - Decade numbers are one group of 10, two groups of 10...9 groups of 10. - The meaning of the mathematical symbols < and >.	- Bundle or group 10 ones to make a ten. - Describe teen numbers using place value language, such as 17 is 1 ten and 7 ones. - Connect words to written numerals. - Compare two two-digit numbers by determining the number of tens and the number of ones in each number.	- Build on students' experience with the following skills: - Represent 10 as ten ones. - Represent numbers 11to 19 as a ten and some ones. - Represent two-digit numbers using physical tools, drawings, and number names (2 tens is 20, 2 tens and 7 ones is 27). - Explain the value of each digit in a two-digit number (place value). - Locate a two-digit number on a hundred chart and number line. - Cognitive Strategies - Repeatedly model the strategies - Monitor the students' use of the strategies - Provide feedback to students - Teach self-questioning and self-monitoring strategies - Introduce multiple means of representation for mathematical ideas - Encourage students to use alternative tools to better access the grade level content. Examples include: - Digital or hands-on manipulatives: two

		colored counters, linking cubes, base ten blocks, bears, ten frame counters, beans, straws, subitizing cards, beads, number bonds, dice, dominoes, playing cards, student balance, hundreds chart, etc... ○ Digital resources from math programs or online resources for counting, comparing, addition, and subtraction practice.

Re-Teach

Level of Intensity	Essential Question	Examples
Targeted	What formative assessment data (e.g., tasks, exit tickets, observations) will help identify content needing to be revisited during a unit?	For example, students may benefit from re-engaging with content during a unit on understanding place value by revisiting student thinking through a short mini-lesson because students might have some minor confusions on how to decompose numbers into tens and ones. Students should be using manipulatives, such as base-ten blocks, while building their understanding of place value. The use of a place value chart with base-ten blocks can help to solidify the student's understanding.
Intensive	What assessment data will help identify content needing to be revisited for intensive interventions?	For example, some students may benefit from intensive extra time during and after a unit understanding place value by confronting student misconceptions because students need to have a strong understanding of place value so it is important to clarify any misconceptions the student might have. It is important to utilize manipulatives so students can visually see the concept as well.

Extension

Essential Question	Examples
What type of extension will offer additional challenges to 'broaden' your student's knowledge of the mathematics	For example, some learners may benefit from an extension such as open-ended tasks linking multiple

developed within your HQIM?	disciplines when studying understanding place value because an open-ended task would allow students to explore and have a deeper understanding of place value, which will benefit them in the future.

CCSS Domain	CCSS Cluster
Number and Operations in Base Ten	**Use place value understanding and properties of operations to add and subtract**

Culturally and Linguistically Responsive Instruction

Relevance to Families and Communities	During a unit focused on using place value understanding and properties of operations to add and subtract, consider options for learning from your families and communities the cultural and linguistic ways this mathematics exists outside of school to create stronger home to school connections for students, to work on some problem-solving activities together. They can use their home language for corresponding vocabulary and numbers.
Cross-Curricular Connections	Science: In first grade the NGSS recommend studying light, transparency, and shadows. Consider providing a connection for students to add the lengths of the shadows of two items, where at least one length is in double-digits and the sum is within 100. Social Studies: Social Studies: In first grade the New Mexico Social Studies Standards state students should "Understand the purpose of rules and identify examples of rules and the consequences of breaking them". Consider providing a connection for students to "earn" and "lose" points for following or breaking various rules. Earning can be in groups of 1s, 2s and 5s, and losing can be in groups of 10.
Validate/Affirm/Build/ Bridge	● *How can you design your mathematics classroom to intentionally and purposefully legitimize the home culture and languages of students and reverse the negative stereotypes regarding the mathematical abilities of students of*	● Goal Setting: Setting challenging but attainable goals with students can communicate the belief and expectation that all students can engage with interesting and rigorous mathematical content and achieve in mathematics. Unfortunately, the reverse is also true, when students encounter low expectations through their interactions with adults and the media, they may see little reason to persist in mathematics, which can create a vicious cycle of 47 6 low expectations and low achievement. For example,

marginalized cultures and languages? ● *How can you create connections between the cultural and linguistic behaviors of your students' home culture and language, the culture and language of school mathematics to support students in creating mathematical identities as capable mathematicians that can use mathematics within school and society?*	when studying, using place value understanding and properties of operations to add and subtract goal setting is critical because this is a foundational standard where so many skills are built from. Students need to feel comfortable with the tools and language needed to perform the tasks. There might need to be some added reflection time to encourage students to talk about what is confusing or what they understand.

Planning for Multi-Layered System of Supports

Vertical Alignment

Previous Learning	*Current Learning*	*Future Learning*
● Connect to composing and decomposing numbers into tens and ones and students using what they know to solve word problems within 10. **(K.NBT.1, K.OA.2)**	● Connect to relating counting to addition and subtraction. **(1.OA.5)** ● Connect to starting to generalize addition and subtraction strategies to numbers within 100 and focusing on multiples of 10 to encourage the use of place value concepts/strategies. **(1.NBT.2)**	● Connect to fluently adding and subtracting within 100 and solving word problems using strategies based on place value properties of operations, and/or the relationship between addition and subtraction. **(2.NBT.5)**

Suggested Instructional Strategies

Public Education Department

Pre-Teach		
Level of Intensity	*Essential Question*	*Examples*
Targeted	*What pre-teaching will prepare students to productively struggle with the mathematics for this cluster within your HQIM?*	Some learners may benefit from targeted pre-teaching that uses images/resources when studying using place value understanding and properties of operations to add and subtract because the majority of this cluster will work from the hundreds chart. If students can review this chart and the numbers on it, this will help towards understanding.
Intensive	*What critical understandings will prepare students to access the mathematics for this cluster?*	K.NBT.A: Work with numbers 11-19 to gain foundations for place value This standard provides a foundation for work with place value because it combines the concept of ones and tens. If students have unfinished learning within this standard, based on assessment data, consider ways to provide intensive pre-teaching support prior to the start of the unit to ensure students are ready to access grade level instruction and assignments.

Universal Support Framework		
A student should know/understand...	A student should be able to do...	*Potential Scaffolds*

● When adding two two-digit numbers within 100 sometimes it is necessary to compose a ten.
● How to use knowledge of the tens place to know 10 more or 10 less than a given number without
	● Model addition examples with sums to 100 using concrete materials, pictures, and numerals.
	● Mentally find 10 more or 10 less than a given number in the range of 10-90.
	● Mentally subtract multiples of 10
		● Build on students' experience with the following skills:
		   ○ Show students the pattern on a hundreds chart for 10 more or 10 less.
		   ○ Show students how numbers 10 + are composed of a group of ten and some more.
		   ○ Model how the tens place changes in the digit when it's ten more or ten less.
		   ○ Explain how counting by tens can help to mentally add and subtract by 10.
		   ○ Model why making a ten can help to add

counting.	within a range of 10-90.	two two-digit numbers within 100

		● Cognitive Strategies
		  ○ Repeatedly model the strategies
		  ○ Monitor the students' use of the strategies
		  ○ Provide feedback to students
		  ○ Teach self-questioning and self-monitoring strategies
		  ○ Introduce multiple means of representation for mathematical ideas
		
		● Encourage students to use alternative tools to better access the grade level content. Examples include:
		  ○ Digital or hands-on manipulatives: two colored counters, linking cubes, base ten blocks, bears, ten frame counters, beans, straws, subitizing cards, beads, number bonds, dice, dominoes, playing cards, student balance, hundreds chart, etc...
		  ○ Digital resources from math programs or online resources for counting, comparing, addition, and subtraction practice.

Re-Teach		
Level of Intensity	*Essential Question*	*Examples*
Targeted	What formative assessment data (e.g., tasks, exit tickets, observations) will help identify content needing to be revisited during a unit?	For example, students may benefit from re-engaging with content during a unit on using place value understanding and properties of operations to add and subtract by critiquing student approaches/solutions to make connections through a short mini-lesson because exploring where they went wrong in their approach to understanding place value for adding and subtracting, but also be reintroduced to tools and strategies that work better for their particular needs.

| Intensive | What assessment data will help identify content needing to be revisited for intensive interventions? | For example, some students may benefit from intensive extra time during and after a unit using place value understanding and properties of operations to add and subtract by offering opportunities to understand and explore different strategies because these students might need more individualized support with the different strategies introduced. The various strategies might be helpful to the student; however, they need step by step directions on how to use the strategies and tools to increase familiarity. |

Extension	
Essential Question	*Examples*
What type of extension will offer additional challenges to 'broaden' your student's knowledge of the mathematics developed within your HQIM?	For example, some learners may benefit from an extension such as the opportunity to understand concepts more quickly and explore them in greater depth than other students. When studying using place value understanding and properties of operations to add and subtract because they could consider how adding and subtracting 100 more or less or 1000 more or less would differ from working with 10 more or less.