NEW MEXICO
Public Education Department

New Mexico Instructional Scope

1st Grade Measurement and Data Guide

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

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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

- Measure lengths indirectly and by iterating length units.
  - 1.MD.A.1
  - 1.MD.A.2
- Tell and write time.
  - 1.MD.B.3
- Represent and interpret data.
  - 1.MD.C.4

Grade	*CCSS Domain*	*CCSS Cluster*
1	**Measurement and Data**	**Measure lengths indirectly and by iterating length units.**

Cluster Standard: 1.MD.A.1

Standard	**Standards for Mathematical Practice**
Order three objects by length; compare the lengths of two objects indirectly by using a third object.	• **SMP 6:** Attend to precision. • **SMP 7:** Look for and make use of structure.
Clarification Statement	**Students Who Demonstrate Understanding Can...**
• This standard focuses on the property of **transitivity**: If A is longer than B and B is longer than C, then A must be longer than C as well. Students will revisit this idea in future grades. Students should apply the principle of transitivity of measurement to make indirect comparisons of the length of objects, but they need not use this technical term.	• Identify which of two objects is longer or shorter. • Order three objects by length (longest to shortest or shortest to longest). • Decide how the lengths of two objects relate to one another by comparing them both to a third object (e.g. the crayon is shorter than the pencil because it is shorter than the marker and the marker is shorter than the pencil).
DOK	**Blooms**
2-3	Analyze and Evaluate

1	Measurement and Data	Measure lengths indirectly and by iterating length units.

Cluster Standard: 1.MD.A.2

Standard	Standards for Mathematical Practice
Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*	• **SMP 5:** Use appropriate tools strategically. • **SMP 6:** Attend to precision.
Clarification Statement	**Students Who Demonstrate Understanding Can...**
• Measuring length or distance consists of two aspects, choosing a **unit** of measure and subdividing (mentally and physically) the object by that unit, placing that unit end to end (**iterating**) alongside the object. The **length** of the object is the number of units required to iterate from one end of the object to the other, without gaps or overlaps.	• Illustrate how to use multiple copies of shorter objects to find the length of a longer object. • Connect the length of the longer object to the total number of shorter objects used and express the length of the longer object as the whole number of shorter objects used. • Describe why gaps and overlaps are not allowed when measuring the length of an object.
DOK	**Blooms**
1-2	Knowledge, Understand, and Apply

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Grade	*CCSS Domain*	*CCSS Cluster*
1	**Measurement and Data**	**Tell and write time.**

Cluster Standard: 1.MD.B.3

Standard	**Standards for Mathematical Practice**
Tell and write time in hours and half-hours using analog and digital clocks.	• **SMP 7:** Look for and make use of structure. • **SMP 8:** Look for and express regularity in repeated reasoning.
Clarification Statement	**Students Who Demonstrate Understanding Can...**
Students need to experience a progression of activities for learning how to tell time from a one-handed **clock** to tell time in **hour** and **half-hour** intervals to clocks with the hour and minute **hand**. Students should also make connections between **di gital** and **analog** clocks.	• Identify the difference between an analog and digital clock. • Identify the hour and minute hand on an analog clock. • Remember how many minutes are in an hour and a half-hour. • Observe time to the hour and half-hour. • Write the time in hours and half-hours when given a time verbally. • Draw hands on a clock to show a given time in hours and half-hours. • Relate time on both digital and analog clocks. • Explain what "o'clock" and "thirty" mean.
DOK	**Blooms**
1	Remember and Understand

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Grade	*CCSS Domain*	*CCSS Cluster*
1	**Measurement and Data**	**Represent and interpret data.**

Cluster Standard: 1.MD.C.4

Standard	**Standards for Mathematical Practice**
Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	• **SMP 2:** Reason abstractly and quantitatively. • **SMP 4:** Model with mathematics. • **SMP 6:** Attend to precision.
Clarification Statement	**Students Who Demonstrate Understanding Can...**
• Students' **data** work in Grade 1 has important connections to **addition** and **subtraction**. Students in grade 1 can ask and answer questions about **categorical data** based on a **representation** of the data. Students can also ask and answer questions leading to other kinds of addition and subtraction problems (1. OA), such as **comparing problems** or problems involving the addition of three numbers (for situations with three categories). • There is no single correct way to represent categorical data-and the Standards do not require Grade 1 students to use any specific format. However, students should be familiar with **mark schemes** like the one shown in the figure. Another format that might be useful in Grade 1 is a **picture graph** in which one picture represents one object. (Note that picture graphs are not an expectation in the Standards until Grade 2.)	• Organize a given data set with up to three categories into a chart or other display. • Ask and answer questions about data points. • Compare data from up to three categories.
DOK	**Blooms**
2, 3	Apply, Analyze and Evaluate

Common Misconceptions

- Students may incorrectly read or record data when transferring between different displays.
- Students may pose a question that is too open-ended or has too many choices.
- Students may not collect data from more than one person to answer the questions.

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: **Measurement and Data**	Strand: **Measure lengths indirectly and by iterating length units.**

Suggested Student Discourse Questions

- How do you know the object is longer than a pencil? How do you know the object is shorter than a marker?
- Tell your partner how you know an object is longer or shorter than something else?
- Compare the length of objects found at a student's desks.
- Explain how (students name) ordered the objects by length.

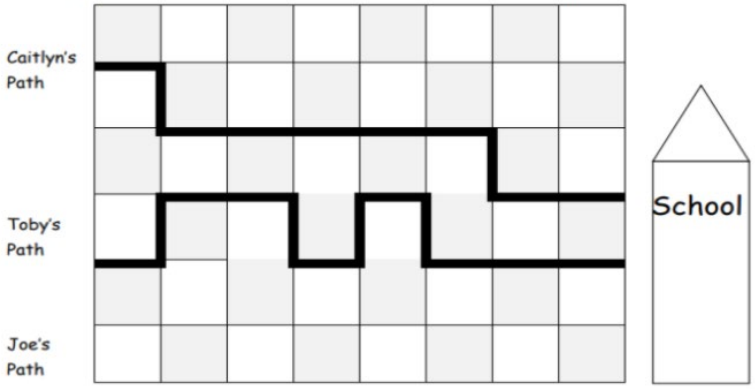
ASSESSMENT GUIDE

- Measure lengths indirectly and by iterating length units
- Tell and write time
- Represent and interpret data

Grade	*CCSS Domain*	*CCSS Strand*
1	**Measurement and Data**	**Measure lengths indirectly and by iterating length units.**

Sample Task #1 (Constructed Response)

Use the picture to answer the questions about the students' paths to school.



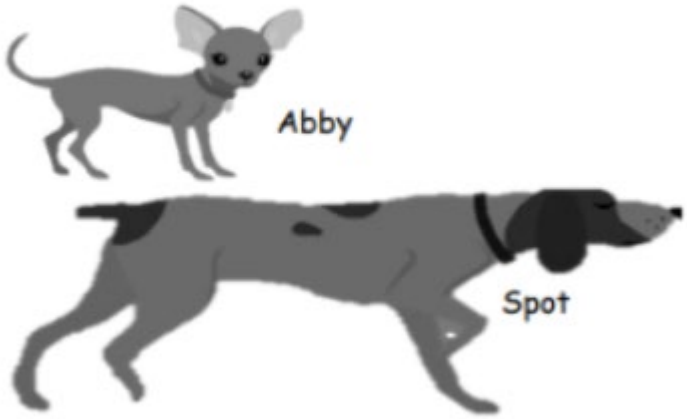
a. How long is Caitlyn's path to school? _____ blocks

b. How long is Toby's path to school? _____ blocks

c. Joe's path is shorter than Caitlyn's. Draw Joe's path.

Sample Task #2

Write the words **longer than** or **shorter than** to make the sentences true.

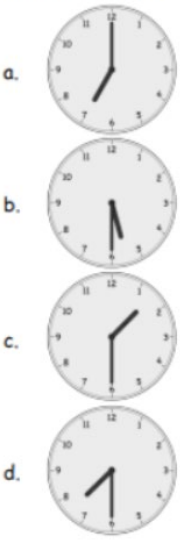


Abby is _____ Spot.

Grade	*CCSS Domain*	*CCSS Strand*
1	**Measurement and Data.**	**Tell and write time.**

Sample Task #1 (Constructed Response)

Match the clocks.



a.	half past 7	7:30
b.	half past 1	7:00
c.	7 o'clock	5:30
d.	half past 5	1:30

Sample Task #2

Circle the correct clock.

1. Half past 2 o'clock

a. 

b. 

c. 

Grade	*CCSS Domain*	*CCSS Strand*
1	**Measurement and Data.**	**Represent and interpret data.**

Sample Task #1 (Constructed Response)

A class collected the information in the chart below. Students asked each other: Among stuffed animals, toy cars, and blocks, which is your favorite toy?

Then, they organized the information in this chart.

Toy	Number of Students
Stuffed Animals	11
Toy Cars	5
Blocks	13

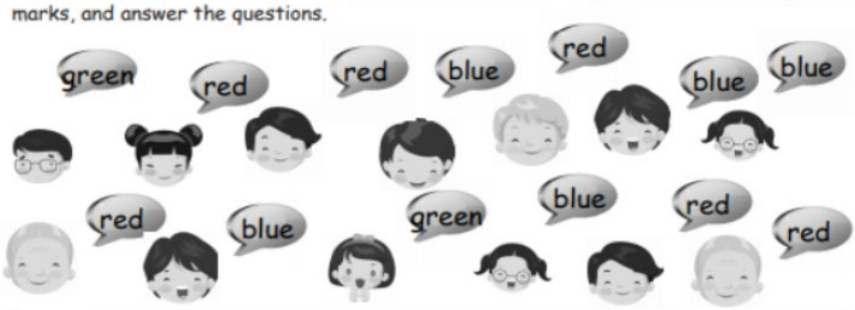
a. How many students chose toy cars? _____

b. How many more students chose blocks than stuffed animals? _____

c. How many students would need to choose toy cars to equal the number of students who chose blocks? _____

Sample Task #2 (Multiple Choice)

A group of people were asked to say their favorite color. Organize the data using tally marks, and answer the questions.



Red	
Green	
Blue	

Which color received the least amount of votes? _____

MLSS AND CLR GUIDE

- Measure lengths indirectly and by iterating length units
- Tell and write time
- Represent and interpret data

CCSS Domain	*CCSS Cluster*
Measurement and Data	**Measure lengths indirectly and by iterating length units**

Culturally and Linguistically Responsive Instruction

Relevance to Families and Communities	During a unit focused on measure lengths indirectly and by iterating length unit, 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, order family members as tallest to shortest of shortest to tallest, give your student many opportunities to measure objects using other, smaller objects, e.g., "How many Lego pieces long is your book? How many blueberries end to end measure the length of this notebook?"

Cross-Curricular Connections	Science: In first grade the NGSS recommend studying light, transparency, and shadows. Consider providing a connection for students to order the lengths of the shadows of various items. Social Studies: A map and strings is often used to track Flat Stanley's travels (*Flat Stanley* by Jeff Brown). Consider providing a connection for students to measure and/or compare the lengths of the strings.	
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?*	• Task: When planning with your HQIM, consider how to modify tasks to represent the prior experiences, culture, language and interests of your students to "portray mathematics as useful and important in students' lives and promote students' lived experiences as important in mathematics class." Tasks can also be designed to "promote social justice [to] engage students in using mathematics to understand and eradicate social inequities (Gutstein 2006)." For example, when studying measure lengths indirectly and by iterating length units the types of mathematical tasks are critical because it will allow students to measure using different tools that may be associated with their culture. They could also measure various objects that are important to their culture. For example, having students bring in an item that may be pertinent in their family such as native jewelry or sombrero etc.

Planning for Multi-Layered System of Supports

Vertical Alignment

Previous Learning	***Current Learning***	***Future Learning***
• Connect to describing measurable attributes of objects, such as length **(K.MD.1)**	• Connect to non-standard objects and more standard measurement tools to help students state length units in whole numbers and make	• Connect to making decisions about the tool's students use to measure the length of an object by selecting and using

• Connect to directly comparing two objects with a measurable attribute in common, to see which object has "more of/less of" the attribute and describing the difference. For example, directly comparing the heights of two children and describing one child as taller/shorter. **(K.MD.2)**	direct and indirect comparisons of objects.	tools such as a yardstick, meter stick, rulers, tape measures, etc. **(2. MD.1)** • Connect to measuring to determine how much longer one object is than another and expressing the length difference in terms of a standard-length unit **(2. MD.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 rehearses prior learning when studying measure lengths indirectly and by iterating length units. In kindergarten children are exposed to comparing objects based on attributes, referring to this will help students understand measurement by noticing how long or short something is.
Intensive	*What critical understandings will prepare students to access the mathematics for this cluster?*	This standard provides a foundation for work with measure lengths indirectly and by iterating length units because students often initially hold undifferentiated views of measurable attributes, saying that one object is "bigger" than another whether it is longer, or greater in area, or greater in volume, and so forth. For example, two students might both claim their block building is "the biggest." Conversations about how they are comparing—one building may be taller (greater in length) and another may have a larger base (greater in the area)—help students learn to discriminate and name these measurable attributes. As they discuss these situations and compare objects using different attributes, they learn to distinguish, label, and Describe several measurable attributes of a single object. 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***

• How to make direct comparisons between two objects such as finding objects that are the same length, longer than, or shorter than.
• The length of an object is the number of same-size length units that span it with no gaps end to end.
• The smaller the unit, the more units will be needed to measure an object.
	• Order three objects by length.
	• Compare the lengths of the two objects indirectly by using a third object.
	• Measure items with different sizes of nonstandard units.
	• State the length of the object with a whole number (representing the number or units).
		• Build on students' experience with the following skills:
		  ○ Identify which of two objects is longer or shorter.
		  ○ Order three objects by length (longest to shortest or shortest to longest).
		  ○ Decide how the lengths of two objects relate to one another by comparing them both to a third object (e.g. the crayon is shorter than the pencil because it is shorter than the marker and the marker is shorter than the pencil).
		• 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: linking cubes, objects in desk, cuisenaire rods, paper clips, strips of paper, index cards, 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 measure lengths indirectly and by iterating length units by examining tasks from a different perspective through a short mini-lesson because sometimes students may need to be taught in a different way. To realize that arbitrary (and especially mixed size) units result in the same length being described by different numbers, a student must reconcile the varying lengths and numbers of arbitrary units.
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 on measuring lengths indirectly and by iterating length units by confronting student misconceptions because children should engage in experiences that allow them to connect number to length, using manipulative units that have a standard unit of length, such as centimeter cubes. These can be labeled "length-units" with the students. Students learn to lay such physical units end-to-end and count them to measure a length. They compare the results of measuring to direct and indirect comparisons.
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 explore links between various topics when studying measure lengths indirectly and by iterating length unit because measurement can be used across multiple areas and allowing students to connect this way will help them deepen their understanding.

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CCSS Domain	*CCSS Cluster*
Measurement and Data	**Tell and write time**

Culturally and Linguistically Responsive Instruction

Relevance to Families and Communities	During a unit focused on tell and write time, 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, Identify the time frame of favorite TV shows, Identify the length of time for sporting event (break up halves or quarters into time lengths, Discuss with parents the times they do important things during the day (wake-up, go to school, get out of school, eat dinner, go to bed). They can then make a schedule of their day writing the times in analog or digital format.	
Cross-Curricular Connections	Social Studies: Different map skills are often explored in first grade, including classroom and neighborhood maps. Consider providing a connection for students to read or write times related to visiting different locations on the map. Language Arts: Literature can offer connections about measurement such as: *The Grouchy Ladybug* by Eric Carle.	
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*	• Facilitating Meaningful Mathematical Discourse: Mathematics discourse requires intentional planning to ensure all students feel comfortable to share, consider, build upon and critique the mathematical ideas under consideration. When student ideas serve as the basis for discussion, we position them as knowers and doers of mathematics by using equitable talk moves students and attending to the ways students talk about who is and isn't capable of mathematics, we can disrupt the negative images and stereotypes around mathematics of marginalized cultures and languages. "A discourse-based mathematics classroom provides stronger access for every student — those who have an immediate answer or approach to share, those who have begun to formulate a mathematical approach to a task but have not fully developed their thoughts, and those who may not have an approach but can provide feedback to others." For example, when studying tell and write time facilitating meaningful mathematical discourse is critical because telling time is an abstract skill requiring students to be able to count, determine the meaning between hours and minutes

	mathematicians that can use mathematics within school and society?	and knowing all the required vocabulary to make sense of the clock, allowing discussion around this will allow for misunderstandings to be cleared and peer to peer.

Planning for Multi-Layered System of Supports

Vertical Alignment

Previous Learning	*Current Learning*	*Future Learning*
• Connect to the fact that while Kindergarten does not have specific standards for time, over the course of a day they are exposed to concepts of time such as the morning, or afternoon, etc.	• Connect telling time to the nearest half-hour to partition circles into halves. **(1.G.3)**	• Connect to telling and writing time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. **(2. MD.7)** • Connect to telling and writing time to the nearest minute and measure time intervals in minutes. Connect to solving word problems involving addition and subtraction of time intervals in minutes, for example, by representing the problem on a number line diagram. **(3. MD.1)**

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 rehearses new mathematical language when studying tell and write time because when learning how to tell time to the hour and half hour students need to know the proper language and vocabulary attached to accurately tell time.
Intensive	*What critical understandings will prepare students to access the mathematics for*	1.MD.B.3: This standard is the foundation for work with tell and write time because telling time to the hour and half hour in first grade is an additional cluster and is

	this cluster?	introduced in first grade to continue work in 2nd grade. 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.
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 tell and write time by clarifying mathematical ideas and/or concepts through a short mini-lesson because when telling time in first grade they frequently misinterpret how the numbers on the clock are supposed to be read. Therefore, re-teaching this skill in a small group will benefit them, providing a lot of time for practice.
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 tell and write time by confronting student misconceptions because students frequently misinterpret the numbers on the clock. They may say it is two, six; instead of two thirty. Giving students more time for practice will help clear up these misconceptions.
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 telling and writing time because students who already grasp the concept of telling time to the hour and half hour may be ready to explore the connections between time and astronomy.

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CCSS Domain	*CCSS Cluster*
Measurement and Data	**Represent and interpret data**

Culturally and Linguistically Responsive Instruction

Relevance to Families and Communities	During a unit focused on 1.MD.C, represent and interpret data, 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, for example, learning about the different structures for the number names across the languages in your classroom can lead to a more robust understanding of number for all students by making connections to the different structures of number-names in other languages.	
Cross-Curricular Connections	Language Arts: Consider providing an opportunity for students to survey each other regarding the books they are reading (favorite book, favorite character, what do you think will happen next) and then graph and analyze the results. Physical Education: Consider providing an opportunity for students to time or count the number of reps they can do for a certain fitness task (sprint, sit-ups, jumping jacks) and then graph and analyze the results.	
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*	• Using and Connecting Mathematical Representations: The standard for mathematical practice, use appropriate tools strategically, provides a strong foundation to validate and bridge for students. Mathematical representations are mathematical tools. The linguistic and cultural experiences of students provide different and varied types of representations for solving mathematical problems. By explicitly encouraging students to use multiple mathematical representations students can draw on their "mathematical, social, and cultural competence". By valuing these representations and discussing them we can connect student representations to the representations of school mathematics and build a bridge for students to position them as competent and capable mathematicians. For example, when studying the math skill on being able to organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another the use of mathematical representations within the

	mathematicians that can use mathematics within school and society?	classroom is critical because students are transitioning and learning more representations of math through the use of data and categories. Students may also be utilizing symbols when interpreting data and can even bring in their own symbols related to their culture when creating data. Students can build a bridge between mathematics and culture, along with language as they interpret data and answer questions related to the data and information provided. Also, students can represent not only their learning, but category information as well to make cultural connections and build on this skill.

Planning for Multi-Layered System of Supports

Vertical Alignment

Previous Learning	*Current Learning*	*Future Learning*
• Connect to classifying objects into given categories and sorting the categories. Connect to counting the number of objects in each category and understanding the relationship between numbers and quantities in order to answer questions about how many up (to 20). **(K.MD.3) (K.CC.3-5)**	• Connect to using addition and subtraction within 20 to solve word problems that may use up to three whole numbers. **(1.OA.1-2)** Using tally marks to represent data collected provides an opportunity to have more practice with groups of tens and ones.	• Connect to representing a data set with up to four categories by drawing a picture graph and a bar graph with single-unit scale. **(2. MD.10)**

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 rehearses new mathematical language when studying the skill of being able to organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another because students are working with new mathematical vocabulary words that include, category, categories, and data for example. It is important to ensure that students have a clear understanding of these new math terms as they work to solve problems associated with being able to represent and interpret data.
Intensive	*What critical understandings will prepare students to access the mathematics for this cluster?*	K.MD.B.3: This standard provides a foundation for work with students being able to classify objects and count the number of objects in each category because it will then set up the foundation of students to be able to count correctly, and associate a given total to a specific category. As students' progress in first grade, they will be expected to work within a maximum of three categories and be able to identify totals, and one more or one less of an amount in any given category. 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.
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 being able to organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another by clarifying mathematical ideas and/or concepts through a short mini-lesson because students will be able to receive intervention on the skills associated with organizing, representing and interpreting data within up to three categories. This is important because it can clear up any misconception's students may have either associated with the categories or data that are being represented,

		as well as any mathematical counting errors of one more or one less of a category.
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 in which they are able to organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another by helping students move from specific answers to generalizations for certain types of problems because students will be exposed to data in multiple ways as they continue with first grade and prepare for second grade concepts. Students gain new understanding that data exists all around them and with cross-curricular topics and can be used to organize data points and information into categories and based on that organization it allows for students to make meaning of data and information while comparing the totals of various categories.

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 explore links between various topics when studying the skill of being able to organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another because this allows students to make connections related to data and connections. When given choice and the opportunity to explore topics of choice related to this mathematical skill, students may be more engaged in the work and in making connections related to the organization and representation of data. Also, students are given the opportunity to see more real-world connections associated with data, categories, recognizing one more or one less and being able to compare categorical values.