



**Bluebonnet
Learning**
K-5 Math
EDITION 1

ENGLISH

Grade 2

Course Guide

TEACHER EDITION

Course Guide

K–5 Math Grade 2

Acknowledgment

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Notice

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Introduction

Welcome to the Grade 2 Course Guide. This guide is designed to give Grade 2 teachers specific knowledge about the structure of the instructional materials to help them effectively transition into the program. Included in this guide is information about standards, assessment tools, the focus of each module, and ways for families to support students at home. This guide also provides information about how to tailor the culture of learning to the developmental needs of students, including a background on developmental advances that affect how students learn in Grade 2 and practical strategies for troubleshooting misconceptions collaboratively with students.

Profile of a Grade 2 Math Learner

Grades 2 through 4 cover a period when students' math abilities are rapidly changing, growing, and starting to come together. Their motor skills, estimation abilities, abstract reasoning, self-regulation, and peer interaction skills need to be coordinated for them to be successful with the instructional materials. Often, this means that students may become confused or solve problems incorrectly because one or more of the requisite skills are still developing. For example, students with developing motor skills may have difficulty with manipulating tiles during activities that teach arrays.

Students at these grade levels are also at the very beginning of developing their abstract reasoning abilities. For this reason, students can find it challenging to reason about inequalities with different units (e.g., that 10 cm is smaller than 5 m, despite 10 being a larger whole number than 5) or inequalities with different place values (e.g., that 900 is less than 1,100, even though 9 is greater than 1). Students' concrete and rule-based reasoning can also make it more challenging for them to grasp key principles in arithmetic (e.g., that 3×6 is the same as 6×3).

In grades 2 through 4, many students are still developing into fluent readers, which might cause them to focus on certain terms in a word problem and ignore the rest of the context (e.g., they look for the word *total* and then add the numbers in the problem). In addition, students' self-control is still developing. This might cause students to rush to solve problems and write down the first answer they think of.

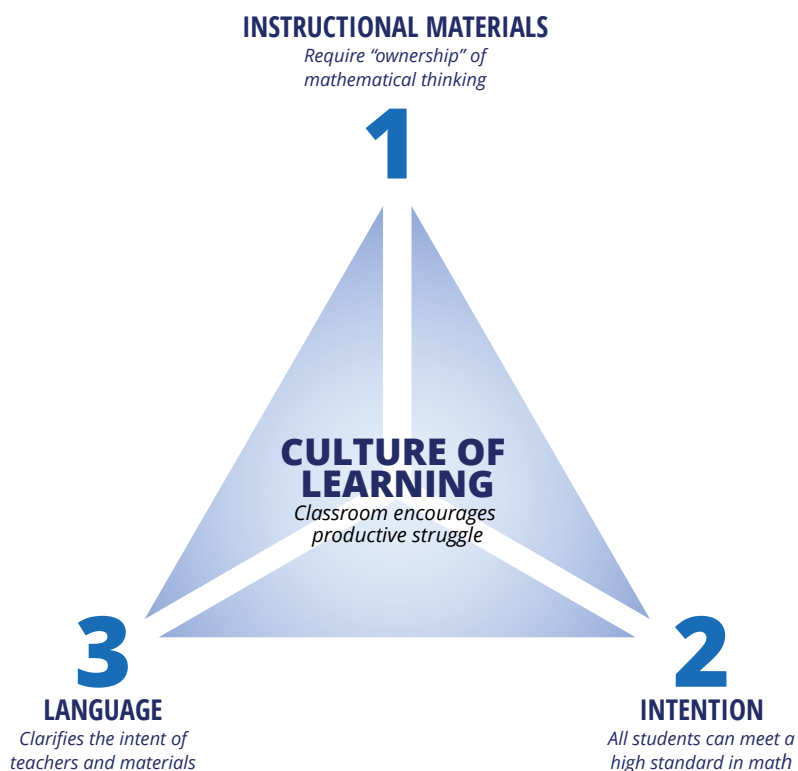
These emerging skills need to be coordinated to solve math problems correctly. As a result, teachers of students in this age range play an important role in helping young math learners learn the math content and in laying a foundation for number sense, arithmetic, problem solving, and more. This work will prepare students for more complex and representational math later in the instructional materials. This means that teachers need to look at the underlying reasons why a student might have gotten a problem wrong—whether it is an abstract reasoning skill, a literacy skill, or an impulsivity issue—and tailor instruction appropriately.

The modules in *Bluebonnet Learning K–5 Math* instructional materials are designed to effectively help teachers analyze students' work and provide the instructional support that best meets students' needs. The activities support students' developmental needs by identifying student misconceptions and providing guidance to address these misconceptions. This ensures that students can move away from an algorithmic, rule-based version of math—which can often lead them astray as the concepts become more complex—toward a more holistic competence with mathematical reasoning. For example, teachers are encouraged to have students work in small groups on problems and explain their reasoning to one another. This approach allows teachers and students to identify and correct misconceptions as they arise.

For students to benefit from the *Bluebonnet Learning K–5 Math* instructional materials approach, they need to be provided with opportunities to engage in productive struggle. This means that students boldly and confidently learn to confront mistakes, reframe them into learning opportunities, and then move forward, deepening their mathematical reasoning throughout the year. One of the best ways to encourage students to embrace productive struggle is to promote a classroom culture of learning. A culture of learning is one in which students embrace the process of productive struggle. It is also a culture free from the common idea that “fast at math = good at math.” By creating a culture of learning and encouraging students to view challenges as an expected and even desirable part of the learning process, teachers can help students avoid a fear of math that could undermine the mathematical future of many students. Instead, students can start enjoying and feeling confident in math even if their answers do not always come quickly.

Culture of Learning in Grade 2

As noted in the Program and Implementation Guide, the way to engage math learners and help them embrace the productive struggle that’s needed to learn deeply is to create a culture of learning.¹ As shown in the figure below, a culture of learning rests on a foundation of (1) high-quality instructional materials, (2) a teacher’s intentions, and (3) the language that communicates the intent of teachers and materials.



¹ Yeager. 10 to 25, 2024.



A culture of learning can be created beginning on the first day of Module 1. A teacher can use language that communicates their intent for all students to be supported as they are held to a high standard for learning.² A culture of learning can also be maintained throughout the year since teachers will continue to support math learners as they embrace challenge. For example, teachers can use language that clarifies their intent of assigning the rigorous challenges students will face in the instructional materials.

A challenge for teachers is that it can take longer to use language that supports a culture of learning. However, using language that communicates a culture of learning supports students' developmental needs and learning. In contrast, language that communicates a culture of compliance can undermine students' motivation and engagement because it doesn't fit with their developmentally appropriate desire for autonomy and understanding.³

Teacher Behavior	Language that Communicates a <i>Culture of Compliance</i>	Language that Communicates a <i>Culture of Learning</i>
Introduce the next activity in the lesson plan.	Do this next. You'll get a bad grade if you don't.	This next activity will help you understand the material better because _____.
Give students a set of problems that they aren't supposed to finish perfectly in the allotted time (e.g. Sprint).	Just do your best.	Most of you won't answer all these problems and you might not get them all correct. That's okay. I'm trying to challenge you so that I can learn what you're prepared to do and what I need to teach you next.
Ask students to explain their thinking on a problem answered incorrectly.	Tell me why you got this wrong.	I'd like you to explain your thinking about this answer. It will help me know how to explain the concept in a way that will be more helpful to you. There is a good chance that somebody else made the same mistake, so your thinking can help the whole class learn.

The language in the second column promotes a culture of compliance. Students in grades 2 through 5 are likely to perceive this as disrespecting their need for autonomy and independent thinking.

The language in the third column promotes a culture of learning because it supports students' autonomy. It implies that students can own their thinking and that they deserve valid explanations. This approach can help students feel respected and cause them to be more motivated and engaged.

² Cohen, Steele, and Ross, "The Mentor's Dilemma," 1999.

³ Ruck, Abramovitch, and Keating. "Children's and Adolescents' Understanding of Rights," 1998.

Collaboratively Troubleshooting Student Misconceptions

It is common for students to make mistakes as they build their understanding of new or difficult concepts. From a student perspective, mistakes can logically occur whenever students try to apply previous learning to new problems that require a different approach. To help students correct their thinking and develop a better understanding, teachers can identify the knowledge that students are building on when they make a mistake.

The *Bluebonnet Learning K–5 Math* instructional materials list common student mistakes for each module. Teachers can use this information to troubleshoot mistakes collaboratively with students.

As noted in the Program and Implementation Guide, *collaborative troubleshooting* is a routine to help teachers address students' misconceptions. The three steps to collaborative troubleshooting are

- (1) surface student thinking;
- (2) validate what the student did right; and
- (3) bridge to a better understanding.

In Step 1, it's helpful to ask questions to better understand what the student was thinking when they made a decision. For example, the teacher can ask, "Can you tell me more about your thinking on this problem?" or "I noticed you wrote _____. What were some of your reasons for doing that?"

In Step 2, it's helpful to point out the parts of the problem that the student understood or did correctly. That way, the student maintains their successful thinking as they retry a problem. For example, teachers can say "I noticed you did _____ and wrote _____, and that's great because that means you understood _____."

Last, in Step 3, the teacher can build on the student's assets and bridge to a better understanding. It can help to ask guided questions that invite the student to build a stronger understanding. For example, the teacher can ask the following questions:

- "If you keep _____ [correct thinking] and changed _____ [misconception] to _____ [alternative], then what do you think might happen?"
- "What would happen if you did _____ instead of _____?"
- "If _____ [correct thinking] is true, then how does that thinking affect _____ [misconception]?"

In practice, this routine may look and sound like the following teacher–student dialogue, which is based on a misconception for Grade 2 Module 1 Topic B that is listed in the Module Overview.

Note: Teachers can adopt this sample dialogue to other misconceptions listed in the Module Overview.



Scenario: A student relies on counting strategies instead of using place value knowledge to make the next ten. The teacher has a one-on-one discussion with the student.

Step 1: Surface student thinking.

T: (Write $39 + 4 = \underline{\quad}$.) What is 39 plus 4? How do you know?

S: 39 plus 4 equals 43. I counted on: thirty-nine, 40, 41, 42, 43.

Step 2: Validate what the student did right.

T: You're right. You counted on from 39 to add 4 more.

T: Let's solve this problem again using a different strategy.

Step 3: Bridge to a better understanding.

T: Look at the number sentence again.

T: (Draw 39 using quick tens and circles.) 39 is so close to...?

S: 40.

T: 39 needs how many more to make 40?

S: 1 more.

T: Where can we get 1 more?

S: Break apart the 4.

T: (Write the number bond as shown in the image).
4 is 1 and...?

S: 3.

T: (Complete the number bond. Draw one "x" to complete the ten. Then draw the other three x's to the right of that ten, as shown. Write $39 + 1 = \underline{\quad}$.) What is 39 plus 1?

S: 40.

T: (Write 40 to complete the number sentence). What is the other part of the number bond that makes 4?

S: 3.

T: (Write $40 + 3 = \underline{\quad}$.) What is 40 plus 3?

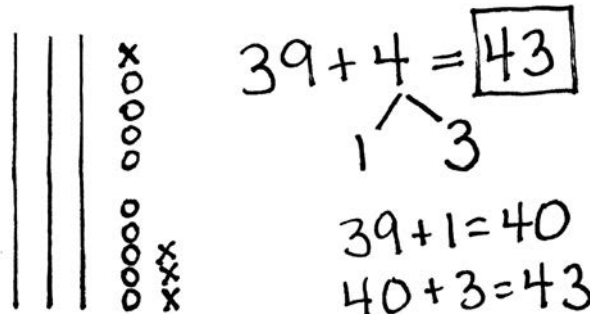
S: 43.

T: (Write 43 to complete the number sentence and the original equation).

T: Where do you see 40 and 3 in the drawing? In the equation?

S: I see 4 tens in the drawing. I also see 3 x's, or 3 ones. That's 40 plus 3.

T: Since 39 is close to a ten, we broke apart the other addend to make a simpler problem. It is simpler to add 40 and 3 than to add 39 and 4. Making the next ten is a more efficient strategy than counting on.



Assessment Reflection Tool

An assessment reflection can be powerful in helping to surface student thinking and in helping students to monitor and track their own growth. It can also help students anticipate and process any thoughts they may have about completing an assessment.

The Assessment Reflection Tool can help teachers guide discussions both prior to and after an assessment. These discussions help the teacher promote a culture of productive struggle as students go into testing. These discussions also support students' needs after testing and give students the opportunity to reflect on their progress and learn from their mistakes after an assessment.

Grades 2–5				
		Teacher Says or Does	Students Say or Do	Teacher Says or Does
Pre-assessment	Opening Discussion	Hand out the Assessment Reflection. Say, “As we prepare to complete this assessment, take a moment to reflect on your learning and what you are thinking in anticipation of the assessment.” Encourage quiet reflection during this time. Ask, “What are you thinking? Write down your thoughts in the top box of your Assessment Reflection.”	Read their responses aloud to a partner to help them be comfortable sharing out in a larger group.	Say, “I have heard a lot of your responses. Whatever you may be thinking, I want you to remember that this assessment is just one part of your learning journey.” Say, “Remember, an assessment is just a way for me to see where you are in your learning so that I can better support you.”
	Item and Content Analysis	Direct students to complete the assessment. Say, “Before you answer the assessment questions, look at each one and write a plus sign next to any questions you think you will get right. Write a minus sign next to any questions you feel unsure about. Say, “After you answer each question, feel free to go back and change any plus or minus signs. You may be unsure of a question at first glance but then find that you have the tools to solve it. Also, you may believe a question will be simple but then face difficulties when solving it.”	Complete their item analysis as they take their assessment. This will be used for the post-assessment analysis.	Monitor student responses as students complete the assessment. After the assessment, review each student’s Assessment Reflection to keep track of student confidence level trends.



Grades 2–5				
		Teacher Says or Does	Students Say or Do	Teacher Says or Does
Post-assessment	Reflection	Hand back each student’s assessment. Say, “I see a lot of things for you to be proud of, like all the work you did. Remember, this assessment is just a tool that we can use to help you know where you are along your learning journey.” Say, “I am going to give you 1 minute to write down everything you’re thinking now that you’ve taken the assessment. You will not share these reflections with other students. I will be the only one who reads them.” Consider providing a list of words to help students identify their reflections.	Take time to complete the reflection freewrite. Complete the “After the assessment” questions in the Assessment Reflection. [Note: Some students may have very clear responses, and some may need support with identifying their thoughts.]	Walk around and monitor student responses. Take the opportunity to have one-on-one conversations with any students who need support with identifying their reflections. Say, “I can see you wrote ____ about your assessment. Why?” Listen to and acknowledge student responses. Say, “We are going to work together to help you understand where the mistakes came from. Mistakes are important because they help us grow.”
	Honoring Mistakes	Say, “Let’s dive into our mistakes together. Work with your group to complete the table on your Assessment Reflection.” Invite students to select 1 or 2 questions from their Assessment Reflection. For each question, direct them to fill out a row in the table.	Write down their question choice(s) and work with their groups to complete their item analysis.	Collect Assessment Reflections and discuss specific questions with groups or individual students. Say, “I saw a lot of things to be proud of. I saw all the work and the thinking that you put into this assessment. It is also okay for you to be confused or unsure about some items on the assessment. We will work together to help you keep improving your knowledge and understanding.” Use collaborative troubleshooting to help guide students through their assessment and clear up any misconceptions.





Student Name: _____ Date: _____

Pre-Assessment: As we prepare to complete this assessment, what are you thinking?				
Post-Assessment Reflection:				
Question	What are your reflections on this question during the assessment?	If the question you answered incorrectly was confusing, why was it confusing?	What did you know or what were you able to do?	What will you remember for next time?
		• I didn't know where to start. • I wasn't sure what the question was asking. • The visual (picture, chart, map, etc.) confused me. • I forgot the content. • There were words I didn't know.		
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		• I didn't know where to start. • I wasn't sure what the question was asking. • The visual (picture, chart, map, etc.) confused me. • I forgot the content. • There were words I didn't know.		
Now that you are done with the assessment, what are you thinking?		What are some things you can do differently to prepare for the next assessment?		

Progression of Mathematical Concepts

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	1st QUARTER	2nd QUARTER	3rd QUARTER	4th QUARTER
	M1: Numbers to 10 (41 days)	M1: Sums and Differences to 10 (43 days)	M1: Sums and Differences to 100 (9 days) M2: Addition and Subtraction of Length Units (11 days)	M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 (22 days)	M1: Place Value, Rounding, and Algorithms for Addition and Subtraction (23 days)	M1: Place Value and Decimals (19 days)				
	M2: Two-Dimensional and Three-Dimensional Shapes (10 days)	M2: Introduction to Place Value Through Addition and Subtraction Within 20 (33 days)	M3: Place Value, Counting, and Comparison of Numbers to 1,200 (22 days)	M2: Place Value and Problem Solving with Units of Measure (31 days)	M2: Unit Conversions and Problem Solving with Metric Measurement (10 days)	M2: Multi-Digit Whole Number and Decimal Operations (37 days)				
	M3: Comparison of Length, Weight, Capacity, and Numbers to 10 (33 days)	M3: Ordering and Comparing Length Measurements as Numbers (13 days)	M4: Addition and Subtraction Within 200 with Word Problems to 100 (30 days)	M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 (26 days)	M3: Multi-Digit Multiplication and Division (38 days)	M3: Addition and Subtraction of Fractions (18 days)				
	M4: Number Pairs, Addition and Subtraction to 10 (44 days)	M4: Place Value, Comparison, Addition and Subtraction to 40 (23 days)	M5: Addition and Subtraction Within 1,000 with Word Problems Within 1,000 (23 days)	M4: Multiplication and Area (10 days)	M4: Angle Measure and Plane Figures (20 days)	M4: Multiplication and Division of Fractions (30 days)				
	M5: Numbers 10–20, Counting to 100, and Understanding Work (31 days)	M5: Identifying, Composing, and Partitioning Shapes (18 days)	M6: Foundations of Multiplication, Division, and Area (22 days)	M5: Fractions as Numbers on the Number Line (36 days)	M5: Fraction Equivalence, Ordering, and Operations (35 days)	M5: Addition and Multiplication with Volume and Area (23 days)				
	M6: Analyzing, Comparing, and Composing Shapes (6 days)	M6: Place Value, Comparison, Understanding Income with Addition and Subtraction to 100 (35 days)	M7: Problem Solving with Length, Money, and Data (29 days)	M6: Financial Literacy and Data (17 days)	M6: Introduction to Decimals and Financial Literacy (22 days)	M6: Problem Solving with the Coordinate Plane and Data (38 days)				
			M8: Time, Shapes, and Fractions as Equal Parts of Shapes (19 days)	M7: Geometry and Measurement Word Problems (23 days)	M7: Exploring Measurement with Multiplication and Data (17 days)					

Key:

Number	Geometry	Number and Geometry, Measurement	Fractions
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Sequence of Grade 2 Modules Aligned with the TEKS

Module 1: Sums and Differences to 100

Module 2: Addition and Subtraction of Length Units

Module 3: Place Value, Counting, and Comparison of Numbers to 1,200

Module 4: Addition and Subtraction Within 200 with Word Problems to 100

Module 5: Addition and Subtraction Within 1,000 with Word Problems Within 1,000

Module 6: Foundations of Multiplication, Division, and Area

Module 7: Problem Solving with Length, Money, and Data

Module 8: Time, Shapes, and Fractions as Equal Parts of Shapes

Summary of Year

Grade 2 mathematics is about (1) extending understanding and utility of base-ten notation; (2) building proficiency with addition and subtraction; (3) using standard units of measure to describe length, area, and time; (4) describing and analyzing shapes; and (5) exploring personal financial literacy.

Rationale for Module Sequence in Grade 2

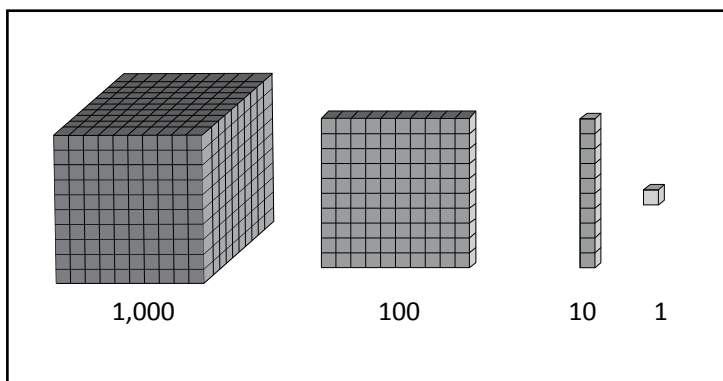
In Grade 1, students gained addition and subtraction proficiency within 10 and experience working with numbers to 100. Module 1 of Grade 2 begins with motivating, differentiated lessons that re-establish basic fact automaticity to achieve proficiency of Grade 2 fluencies (i.e., adding and subtracting within 20 and within 100) by the end of the year. Students contextualize addition and subtraction as they apply strategies to solve word problems using the Read–Draw–Write, or RDW process. Though encouraged to use math drawings that are intuitive for them, some situations are modeled using a strip diagram, encouraging students to generalize and analyze part–whole relationships.

In Module 2, students measure and estimate using standard length units. They discover that linear measurement involves an iteration of units. Through exploration, students realize that the smaller the unit is, the more iterations of that unit are necessary to cover a given length. Students work exclusively with metric units (e.g., centimeters and meters) in this module to support upcoming work with place value concepts in Module 3. Students relate addition and subtraction to measurement by solving word problems involving length. Understanding units plays a central role in the addition and subtraction algorithms of Modules 4 and 5.

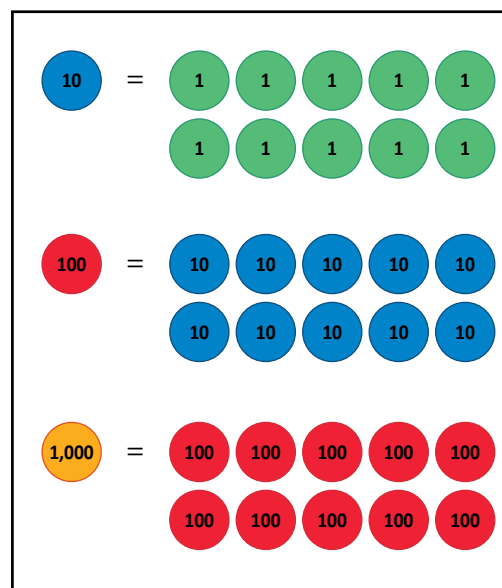
In Module 3, students extend their understanding of base-ten notation and apply their understanding of place value to count and compare numbers to 1,200. In Grade 2, place value units move from a proportional model, such as bundles of straws, to a non-proportional model, such as number disks. Students work with ones, tens, and hundreds to build conceptual understanding of the base-ten system, which will support them through Grade 5 as they perform more complex mathematics.

In Module 4, students apply their work with place value units to add and subtract within 200, moving from concrete to representational to abstract. This work deepens their understanding of base ten, place value, and the properties of operations. It also prompts them to apply their knowledge to generate and solve one-step and multi-step word problems. During this module, students also continue to develop one of the required fluencies of the grade: addition and subtraction within 20.





Proportional Model for Place Value



Non-Proportional Model for Place Value

Module 5 builds upon the work of Module 4. Students again use place value strategies, manipulatives, and math drawings to extend their conceptual understanding of the addition and subtraction algorithms to numbers within 1,000. They maintain addition and subtraction fluency within 100 through daily application work to solve one- and multi-step word problems of all types. A key component of Modules 4 and 5 is that students use place value reasoning to explain why their addition and subtraction strategies work.

In Module 6, students extend their understanding of a unit to build the foundation for multiplication and division wherein any number, not just powers of ten, can be a unit. Making equal groups of 4 apples each establishes the unit four apples (or just four) that can then be counted: 1 four, 2 fours, 3 fours, etc. Relating the new unit to the one used to create it lays the foundation for multiplication: 3 groups of 4 apples equals 12 apples (or 3 fours is 12). Students compose and manipulate rows and columns of an array to deepen their understanding of spatial structuring as they build and partition rectangles with rows and columns of same-size squares, thus discovering area. Students eventually relate repeated addition to multiplication and repeated subtraction to division.

Module 7 provides another opportunity for students to practice their problem-solving skills using algorithms. Working with the appealing units of bills and coins reinforces place value understanding and provides real-life contexts for problem solving. Students also learn about saving and spending while comparing consumers and producers and borrowing and lending. Measuring and estimating length is revisited in this module using both customary units (e.g., inches and feet) and metric units (e.g., centimeters and meters). As students study money and length, they represent measurement data and money data by creating pictographs and bar graphs.

Students finish Grade 2 describing and analyzing shapes in terms of their attributes. In Module 8, students investigate, describe, and reason about the composition and decomposition of shapes to form other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades. Students also use their work with shapes to build an understanding of fractions (halves, fourths, and eighths). Working with fractions allows students to tell time accurately and grasp the meaning of phrases such as “half past” and “quarter to.”



Grade 2 Year-at-a-Glance

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8
Sums and Differences to 100	Addition and Subtraction of Length Units	Place Value, Counting, and Comparison of Numbers to 1,200	Addition and Subtraction Within 200 with Word Problems to 100	Addition and Subtraction Within 1,000 with Word Problems Within 1,000	Foundations of Multiplication, Division, and Area	Problem Solving with Length, Money, and Data	Time, Shapes, and Fractions as Equal Parts of Shapes
9 days	11 days	22 days	30 days	23 days	22 days	29 days	19 days
2.4A	2.9A	2.2A	2.2A	2.2A	2.4B	2.2C	2.2C
2.4B	2.9B	2.2B	2.2C	2.2C	2.6A	2.2D	2.3A
2.4C	2.9C	2.2C	2.4A	2.4B	2.6B	2.2E	2.3B
2.7C	2.9D	2.2D	2.4B	2.4C	2.7A	2.2F	2.3C
	2.9E	2.2E	2.4C	2.4D	2.9F	2.4A	2.3D
		2.7B	2.4D	2.7B		2.4B	2.4A
			2.7B			2.4C	2.4B
			2.7C			2.5A	2.8A
						2.5B	2.8B
						2.9A	2.8C
						2.9B	2.8D
						2.9C	2.8E
						2.9D	2.9A
						2.9E	2.9B
						2.10A	2.9G
						2.10B	
						2.10C	
						2.10D	
						2.11A	
						2.11B	
						2.11C	
						2.11D	
						2.11E	
						2.11F	

Boldface = Focus Standard



Grade 2 Scope and Sequence

Bluebonnet Learning K–5 Math Instructional Materials: Grade 2 Scope and Sequence			
Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
Module 1: Sums and Differences to 100	A: Foundations for Fluency with Sums and Differences Within 100 B: Initiating Fluency with Addition and Subtraction Within 100 End-of-Module Assessment Task Assessments: 1 Lesson days: 8 Assessment days: 1 Total instructional days: 9	Students develop fluency as they add and subtract numbers up to 100 using place value understanding, properties of operations, and the relationship between addition and subtraction. Students will: - Review and build upon familiar skills from Kindergarten and Grade 1 such as breaking apart a total, identifying partners to 10, and adding ten plus facts. - Use number bonds to make a ten when adding numbers up to 100 and take from ten when subtracting numbers up to 100 to make simpler problems.	TEKS <u>MPS</u> 2.1C 2.1F TEKS 2.4A 2.4B 2.4C 2.7C ELPS 1.B 1.C 1.E 1.F 1.G 2.C 2.E 2.I 3.E 3.G 4.D 4.G 5.A 5.B
Module 2: Addition and Subtraction of Length Units	A: Understand Concepts About the Ruler B: Measure and Estimate Length Using Different Measurement Tools C: Measure and Compare Lengths Using Different Length Units D: Relate Addition and Subtraction to Length	Students deepen their understanding of measurement and relate addition and subtraction to length. Students will: - Learn how to measure using centimeter cubes. - Practice the <i>mark and move forward</i> technique using just one cube. - Measure objects with tools such as centimeter rulers, measuring tapes, and meter sticks. - Estimate using mental benchmarks.	TEKS <u>MPS</u> 2.1C 2.1E 2.1F 2.1G TEKS 2.9A 2.9B 2.9D 2.9E 2.9C



Grade 2 Scope and Sequence (Continued)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
	End-of-Module-Assessment Task Assessments: 1 Lesson days: 10 Assessment days: 1 Total instructional days: 11	- Use different length units such as paper clips, crayons, and other everyday objects to measure and compare lengths. - Reason about the relationship between unit size and measurement. For example, “Centimeters are smaller than meters, so it takes more centimeters than meters to measure this table.” - Solve addition and subtraction word problems involving length. - Use the ruler as a number line and draw strip diagrams to compare lengths.	<u>ELPS</u> 1.B 1.C 1.E 1.F 1.G 2.C 2.E 2.I 3.E 3.G 4.D 4.G 5.A 5.B
Module 3: Place Value, Counting, and Comparison of Numbers to 1,200	A: Forming Base Ten Units of Ten, a Hundred, and a Thousand B: Understanding Place Value Units of One, Ten, and Hundred C: Numbers to 1,200 in Unit, Standard, Expanded, and Word Forms D: Modeling Base Ten Numbers Within 1,200 with Money Mid-Module Assessment Task E: Modeling Numbers up to 1,200 with Place Value Disks F: Comparing Numbers to 1,200 G: Finding 1, 10, and 100 More or Less than a Number	Students develop place value understanding of numbers up to 1,200 and apply that understanding by using concrete and pictorial models, comparing and ordering numbers, and representing numbers using standard, expanded, and word forms. Students will: - Develop knowledge of place value units of ones, tens, and hundreds and the new unit of a thousand. - Learn to skip-count efficiently by reaching a benchmark number—a ten or a hundred. - Explore the value of three-digit numbers and learn to name numbers in standard, unit, expanded, and word form. - Deepen place value understanding by drawing comparisons between ones, tens, and hundreds, and \$1, \$10, and \$100 bills. - Exchange units of equal value, for example, 30 ones for 3 tens, or 4 hundreds for 40 tens.	<u>TEKS MPS</u> 2.1B 2.1C 2.1D 2.1E 2.1F 2.1G <u>TEKS</u> 2.2A 2.2B 2.2C 2.2D 2.2E 2.7B <u>ELPS</u> 1.C 1.D



Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
	End-of-Module Assessment Task Assessments: 2 Lesson days: 20 Assessment days: 2 Total instructional days: 22	- Compare and order whole numbers by using the words <i>greater than</i>, <i>less than</i>, or <i>equal to</i> as well as the comparison symbols ($>$, $<$, $=$). - Identify 1, 10, or 100 more or less than a given number.	1.E 1.F 2.C 2.E 2.I 3.C 3.D 3.E 3.F 3.G 3.H 4.B 4.C 4.D 4.F 4.G 5.B
Module 4: Addition and Subtraction Within 200 with Word Problems to 100	A: Sums and Differences Within 100 B: Strategies for Composing a Ten C: Strategies for Decomposing a Ten Mid-Module Assessment Task D: Strategies for Composing Tens and Hundreds E: Strategies for Decomposing Tens and Hundreds F: Student Explanations of Written Methods End-of-Module Assessment Task Assessments: 2 Lesson days: 27 Assessment days: 3 Total instructional days: 30	Students use their knowledge of place value and properties of operations to build fluency in two-digit addition and subtraction within 100, and to solve one- and two-step word problems within 100. This module also builds students' understanding of addition and subtraction of multi-digit numbers within 200. Students will: - Learn simplifying strategies to develop fluency. - Learn how to add vertically with a focus on building lasting place value understanding. - Model and record the steps of the vertical form by using place value disks on a place value chart. - Use drawings of place value disks and the chip model to show place value concepts at work. - Subtract vertically by aligning place value units. - Compose, or bundle, tens and hundreds when adding. - Use known facts, such as $5 + 8 = 13$ (5 ones + 8 ones = 13 ones), to solve more complex problems, such as $50 + 80 = 130$ (5 tens + 8 tens = 13 tens). - Deepen their understanding of the repetitive nature of the subtraction algorithm, unbundling 1 hundred for 10 tens and 1 ten for 10 ones when necessary. - Compare and discuss the various strategies for adding and subtracting up to 200.	<u>TEKS MPS</u> 2.1A 2.1B 2.1C 2.1D 2.1E 2.1F 2.1G <u>TEKS</u> 2.4B 2.4C 2.4D 2.7B 2.7C 2.2A 2.2C 2.4A <u>ELPS</u> 1.A 1.C 1.F 1.H 2.C 2.D 2.E



Grade 2 Scope and Sequence (Continued)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
		- Learn about an addition method called totals below. - Solve and create one- and two-step word problems.	2.F 2.G 2.I 3.C 3.D 3.E 3.F 3.H 4.B 4.G 5.B 5.G
Module 5: Addition and Subtraction Within 1,000 with Word Problems Within 1,000	A: Strategies for Adding and Subtracting Within 1,000 B: Strategies for Composing Tens and Hundreds Within 1,000 Mid-Module Assessment Task C: Strategies for Decomposing Tens and Hundreds Within 1,000 D: Student Explanations for Choice of Solution Methods End-of-Module Assessment Task Assessments: 2 Lesson days: 20 Assessment days: 3 Total instructional days: 23	Students continue renaming place value units and extend their work with addition and subtraction algorithms to numbers within 1,000. Students will: - Model addition and subtraction with materials and drawings. - Relate <i>100 more</i> and <i>100 less</i> to addition and subtraction of 100. - Use simplifying strategies for addition and subtraction. - Extend the <i>make a ten</i> strategy to make a hundred. - Use compensation to subtract from three-digit numbers. - Use place value language to explain why strategies work. - Add two- and three-digit numbers up to 1,000 by bundling, or composing, units to make a new ten or a new hundred. - Subtract two- and three-digit numbers up to 1,000 by decomposing (i.e. unbundling) tens and hundreds. - Solve and create one- and two-step word problems involving addition and subtraction. - Choose which strategy is most efficient for a given problem, understanding that the strategies they used with one-step problems also work with multi-step word problems.	<u>TEKS MPS</u> 2.1A 2.1B 2.1C 2.1D 2.1E 2.1F 2.1G <u>TEKS</u> 2.4B 2.4C 2.4D 2.7B 2.2A 2.2C <u>ELPS</u> 1.C 1.D 1.E 1.H 2.E 2.G 2.I



Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
			3.D 3.E 3.F 3.G 3.H 4.B 4.C 5.C 5.D 5.E 5.G
Module 6: Foundations of Multiplication, Division and Area	A: Formation of Equal Groups B: Arrays and Equal Groups Mid-Module Assessment Task C: Rectangular Arrays as a Foundation for Multiplication and Division D: The Meaning of Even and Odd Numbers End-of-Module Assessment Task Assessments: 2 Lesson days: 19 Assessment days: 3 Total instructional days: 22	Students develop foundational understanding of multiplication and division. They also begin to build an understanding of area and the meaning of even and odd numbers. Students will: • Create equal groups using objects and drawings. • Write repeated addition sentences to match drawings of equal groups. • Draw strip diagrams to represent equal groups. • Use equal groups to create arrays and describe the arrays in terms of rows and columns. • Use arrays and strip diagrams to model and solve word problems. • Use drawings and a number line to show division situations and relate them to repeated subtraction. • Find the area of a rectangle by counting square units. • Use square tiles and drawings to compose and decompose rectangular arrays to show equal rows and equal columns. • Pair objects and skip-count by twos to investigate even and odd numbers.	<u>TEKS MPS</u> 2.1D 2.1G <u>TEKS</u> 2.6A 2.6B 2.7A 2.9F 2.4B <u>ELPS</u> 1.A 1.C 1.H 2.B 2.C 2.E 2.G 2.I 3.A 3.D 3.E 3.F 3.H 3.J 4.B



Grade 2 Scope and Sequence (Continued)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
			4.D 4.G 4.K 5.F 5.G
Module 7: Problem Solving with Length, Money, and Data	A: Problem Solving with Categorical Data B: Problem Solving with Coins and Bills C: Problem Solving with Financial Literacy Mid-Module Assessment Task D: Creating an Inch Ruler E: Measuring and Estimating Length Using Customary and Metric Units F: Problem Solving with Customary and Metric Units End-of-Module Assessment Task Assessments: 2 Lesson days: 26 Assessment days: 3 Total instructional days: 29	Students use addition and subtraction strategies within 100 and problem-solving skills as they learn to work with various types of units within the contexts of length, money, and data. An exploration of personal financial literacy is also included in this module. Students will: - Learn to sort pictures and information into categories and to record that data in a table. - Create and use pictographs and bar graphs to organize and represent a data set with up to 4 categories per graph. - Count the total value of a group of coins, skip-counting by fives and tens as needed. - Learn to make change from one dollar by using counting on and simplifying strategies (e.g., the arrow way). - Solve one- and two-step word problems involving money and length. - Consider saving as an alternative to spending and learn how money saved can grow into a larger sum over time. - Compare deposit and withdrawal, consumer and producer, and borrowing and lending. - Learn about the inch as a unit of length and understand that 12 inches form a larger unit called a foot. - Measure using both customary units of length (e.g., inches, feet, yards) and metric units of length (e.g., centimeters, meters), choosing appropriate tools to measure each object efficiently. - Generate mental benchmarks for customary units; for example, the width of a quarter is about 1 inch, and the length of a sheet of paper is about 1 foot.	TEKS MPS 2.1A 2.1B 2.1C 2.1D 2.1E 2.1F TEKS 2.2E 2.2F 2.4A 2.4B 2.4C 2.5A 2.5B 2.9A 2.9B 2.9C 2.9D 2.9E 2.10A 2.10B 2.10C 2.10D 2.11A 2.11B 2.11C 2.11D 2.11E 2.11F 2.2C 2.2D



Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
			<u>ELPS</u> 1.A 1.C 1.D 1.F 1.H 2.A 2.B 2.C 2.E 2.G 2.H 2.I 3.A 3.B 3.C 3.D 3.E 3.F 3.G 3.H 3.I 4.D 4.F 4.G 4.H 4.J 5.F 5.G
Module 8: Time, Shapes, and Fractions as Equal Parts of Shapes	A: Attributes of Geometric Shapes B: Composite Shapes and Fraction Concepts Mid-Module Assessment Task C: Fractions of Circles and Rectangles D: Application of Fractions to Tell Time	Students explore two- and three-dimensional geometric shapes, identifying their attributes to sort, classify, and compare. They will study how shapes can be put together to form new shapes and how they can be partitioned, or divided, into equal fractional parts. Students will use their understanding of fraction concepts to tell time. Students will: Use attributes such as the number of sides or angles to describe various shapes.	<u>TEKS MPS</u> 2.1A 2.1B 2.1E 2.1G <u>TEKS</u> 2.3A 2.3B



Grade 2 Scope and Sequence (Continued)

Module	Topics and Instructional Days	Knowledge and Skills	Standards (Bold = focus standard)
	End-of-Module Assessment Task Assessments: 2 Lesson days: 16 Assessment days: 3 Total instructional days: 19	- Use attributes to build different polygons including triangles, quadrilaterals, pentagons, and hexagons. - Use attributes to identify and draw different quadrilaterals including rectangles, rhombuses, parallelograms, and trapezoids. - Use a tangram puzzle to explore how smaller shapes can be put together to form different shapes and to recognize that smaller parts make up a whole. - Partition shapes into equal parts and describe those parts as halves, fourths, or eighths. - Partition a circle into halves and quarters to make a paper clock and tell time to the half hour and quarter hour. - Tell time to the nearest five minutes and relate a.m. and p.m. to time of day.	2.3C 2.8A 2.8B 2.8C 2.8D 2.8E 2.9G 2.2C 2.3D 2.4A 2.4B 2.9A 2.9B <u>ELPS</u> 1.A 1.C 1.E 1.F 1.H 2.C 2.D 2.E 2.I 3.C 3.E 3.H 3.J 4.A 4.B 4.F 4.G 5.G
	Total instructional days: 165 days		



Grade 2 Standards by Lesson

Grade 2 TEKS Mathematical Process Standards by Lesson per Module

Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons	M8 Lessons
2.1A							2, 7, 15, 17	15
2.1B		10	14	5			1, 8, 13, 14, 24	9, 11
2.1C	5, 7	4, 8, 9					20, 23	
2.1D			13	6, 11, 19, 20, 27		3, 5–9, 12, 14	3–6, 9, 10, 12, 26	
2.1E		3	2, 18, 20	7, 9, 18, 24, 26	1, 2, 4–9, 14–17, 19, 20	15	18, 19, 21	1, 2, 4, 6, 7, 14, 16
2.1F	1–4, 6, 8	1, 5, 6	3, 6, 8–12, 15, 17	2–4, 12, 13, 15, 16, 22, 25			11, 16, 22, 25	
2.1G		2, 7	1, 4, 5, 7, 16, 19	1, 8, 10, 14, 17, 21, 23	3, 10–13, 18	1, 2, 4, 10, 11, 13		3, 5, 8, 10, 12, 13



Grade 2 TEKS Standards by Lesson per Module

Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons	M8 Lessons
2.2A			1–14, 18–20	1–5, 15–19	1–7			
2.2B			4–14, 17	15–19				
2.2C			15–18	1–5	1–7		7–14, 24–26	
2.2D			14–17				24–26	
2.2E			8, 9				24–26	
2.2F							24–26	
2.3A						4–9		8–16
2.3B								11
2.3C								8–11
2.3D								8, 10, 11
2.4A	1–8			1–24			1, 2, 5–11, 13, 14, 24–26	
2.4B	3, 6–8			1–27	1–20	1–3	7–14, 24–26	
2.4C	5, 7, 8			1–19, 25–27	1–20		8–17	
2.4D				9–19, 25–27	1–20			
2.5A							2–5, 7–14	
2.5B							7–14	
2.6A						1–15		
2.6B						4–15		
2.7A						16–19		
2.7B			18–20	1–5, 15–19	19, 20			
2.7C	5, 7, 8			1–5, 10–14, 25–27				
2.8A								1–6
2.8B								5, 6
2.8C								2–6
2.8D								3–9
2.8E								7–16
2.9A		1–7					18–23	
2.9B		1–3, 6, 7					20–23	
2.9C							24–26	
2.9D		1–10					18–23	
2.9E		4, 5, 8–10					20–26	
2.9F						10–15		



Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons	M8 Lessons
2.9G								14–16
2.10A							2–4	
2.10B							2–4	
2.10C							2–6	
2.10D							6	
2.11A							15–17	
2.11B							15–17	
2.11C							15–17	
2.11D							15–17	
2.11E							15–17	
2.11F							15–17	



Grade 2 English Language Proficiency Standards by Lesson per Module

Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons	M8 Lessons
1.A				1–5		16–19	7–14	1–6, 10, 11
1.B	2							
1.C	1–8	1–6, 10	1–20	20–27	1–18	1–19	1–19, 24–26	1–6, 12–16
1.D			7–9, 18, 20		13–18		1–6, 18, 19	
1.E	1	1	1–20		13–18			1–6
1.F	3–8	9, 10	4–6	25–27			20–23	10, 11
1.G	3–8							
1.H				1–5, 10–27	1–20	1–3	1–14, 24–26	12–16
2.A							7–14	
2.B						4–19	15–17	
2.C	1, 2	9, 10	1–20	6–14		1–9	15–19	1–6, 10, 11
2.D				6–14				1–6
2.E	3–8	1–3, 5–7	1–20	1–24	1–7, 13–18	1–19	1–17, 20–26	1–11
2.F				25–27				
2.G		9, 10		6–14	1–7	4–9	20–23	
2.H							24–26	
2.I	1–8	1–7, 9, 10	1–20	1–24	1–18	1–19	7–14, 20–26	10–16
3.A						4–19	15–17	
3.B							7–14	
3.C		10	7–9	15–19			1–6, 20–23	7–9, 12–16
3.D		5	1–20	1–5, 15–19	19, 20	16–19	15–17	
3.E	1–8	1, 5, 7, 10	1–20	6–27	1–12	1–19	1–6, 15–23	2–16
3.F	1–8	3		10–14	1–7	4–9	1–6, 15–19	
3.G	1–8		7–9, 15–17		19, 20		7–14	
3.H		7	2, 4, 5, 10–15, 18–20	1–9, 15–27	8–18	10–15	20–26	12–16
3.I							7–14	
3.J						10–15		1–9, 12–16
4.A								1–6
4.B			1, 4–6, 11–14	1–27	1–18	10–19		7–9
4.C			15–17		19, 20			



Standard	M1 Lessons	M2 Lessons	M3 Lessons	M4 Lessons	M5 Lessons	M6 Lessons	M7 Lessons	M8 Lessons
4.D	1–8		1–20			1–3	18, 19	
4.E		6, 7						
4.F			1–20				7–14	1–6, 10–16
4.G	1–8	1, 5, 7, 10	1–20	20–24		4–9	15–17, 24–26	12–16
4.H							7–14	
4.I		9, 10						
4.J							1–6, 20–23	
4.K						4–9		
5.A	1–8							
5.B	3–8	1–10	2–11, 13, 14, 18–20	1–5, 18–20				
5.C					19, 20			
5.D					19, 20			
5.E					19, 20			
5.F						10–15	1–6	
5.G				6–27	1–20	4–9, 16–19	7–26	1–6



Grade 2 Development of Fluency

Overview

Fluency activities are designed to promote automaticity and flexibility by engaging students in ways that build fluency from conceptual understanding. The fluency activities in each lesson provide students with strategic learning opportunities to develop their proficiency with specific TEKS. While all TEKS are included in the instructional materials, some TEKS may not be practiced in a fluency activity.

Fluency Year-at-a-Glance

For specific TEKS descriptions and student expectations, refer to the relevant Fluency Close-Up tables.

GRADE 2	Module								
TEKS	1	2	3	4	5	6	7	8	ADSY
2.2A	•	•	•	•	•			•	•
2.2B	•		•	•	•				
2.2C		•	•	•		•	•	•	•
2.2D		•	•	•					•
2.2E			•						•
2.2F			•						•
2.3A									
2.3B									
2.3C									
2.3D									
2.4A	•	•	•	•	•	•	•	•	•
2.4B	•	•	•	•	•	•	•	•	•
2.4C					•				•
2.4D				•	•				•
2.5A			•		•	•	•		
2.5B			•			•			
2.6A									•
2.6B									•
2.7A					•				

GRADE 2	Module								
TEKS	1	2	3	4	5	6	7	8	ADSY
2.7B			•		•				•
2.7C									
2.8A									•
2.8B									
2.8C						•			•
2.8D									
2.8E									
2.9A		•	•						
2.9B									
2.9C			•						•
2.9D									
2.9E									
2.9F						•			•
2.9G								•	
2.10A									
2.10B									•
2.10C									
2.10D									
2.11A									



GRADE 2	Module								
TEKS	1	2	3	4	5	6	7	8	ADSY
2.11B									
2.11C									
2.11D									

GRADE 2	Module								
TEKS	1	2	3	4	5	6	7	8	ADSY
2.11E									
2.11F									

Fluency Close-Up

Numbers and Operations

The student applies TEKS mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value. The student is expected to:

TEKS	Module	Lessons
2.2A	1	2, 4
	2	2, 5
	3	4, 6, 10, 12
	4	1–2, 4–7, 13, 15, 18, 22, 25
	5	1–2, 9, 11, 15
	8	1, 5, 7, 9–12
	ADSY	4, 11–12, 20
2.2B	1	5
	3	5–6, 9, 12, 14
	4	7, 9
	5	11
2.2C	2	1, 3, 6, 9
	3	1–2, 6, 8–9, 13–14
	4	7–8
	6	2–5, 7–8, 10, 17, 19
	7	1, 8
	8	13–14
	ADSY	1, 2, 13

TEKS	Module	Lessons
2.2D	2	6
	3	14
	4	8
	ADSY	1–2
2.2E	3	1–2, 4–5, 7–8, 14
	ADSY	1, 2, 8–9
2.2F	3	1–2, 4–5, 7–8
	ADSY	8–9



The student applies TEKS mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:

TEKS	Module	Lessons
2.3A	N/A	N/A
2.3B	N/A	N/A
2.3C	N/A	N/A
2.3D	N/A	N/A

The student applies TEKS mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:

TEKS	Module	Lessons
2.4A	1	1–4, 6–8
	2	1–2, 4–5, 7, 9–10
	3	3, 5, 7, 10–11, 13, 15–20
	4	1–6, 9–17, 19–20, 22–27
	5	1, 5–11, 13–20
	6	1–19
	7	1–2, 5–11, 13–23, 25–26
	8	3, 5, 7–9, 16
	ADSY	3–7, 9–12, 19–20
2.4B	1	3–4, 6–8
	2	3, 7–10
	3	1–2, 4–5, 7–8
	4	1–6, 9–20, 22–27
	5	1, 5–11, 13–14, 16–18
	6	1–2, 4–6, 9, 11–14, 16, 18
	7	3, 7, 9–17, 19–20, 23–24, 26
	8	1–2, 4–5, 8–14, 16
	ADSY	3–12, 18–20, 24–25

TEKS	Module	Lessons
2.4C	5	2–4
	ADSY	5, 10, 12
2.4D	4	20–21
	5	2–5, 7–9, 11–14, 17
	ADSY	5, 7, 10, 12



The student applies TEKS mathematical process standards to determine the value of coins in order to solve monetary transactions. The student is expected to:

TEKS	Module	Lessons
2.5A	3	8
	5	15
	6	6
	7	2–5, 15–17
2.5B	3	8
	6	13

The student applies TEKS mathematical process standards to connect repeated addition and subtraction to multiplication and division situations that involve equal groupings and shares. The student is expected to:

TEKS	Module	Lessons
2.6A	ADSY	13–14, 16–17
2.6B	ADSY	16–17

Algebraic Reasoning

The student applies TEKS mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:

TEKS	Module	Lessons
2.7A	5	19–20
2.7B	3	2–3, 6, 9, 11–12
	5	1–2
	ADSY	10
2.7C	N/A	N/A



Geometry and Measurement

The student applies TEKS mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties. The student is expected to:

TEKS	Module	Lessons
2.8A	ADSY	21
2.8B	N/A	N/A
2.8C	6	11
	ADSY	14, 20–21
2.8D	N/A	N/A
2.8E	N/A	N/A

The student applies TEKS mathematical process standards to select and use units to describe length, area, and time. The student is expected to:

TEKS	Module	Lessons
2.9A	2	7
	3	2
2.9B	N/A	N/A
2.9C	3	1–2, 4–5, 7–8
	ADSY	8–9
2.9D	N/A	N/A
2.9E	N/A	N/A
2.9F	6	13
	ADSY	15, 24–25
2.9G	8	15
	ADSY	N/A



Data Analysis

The student applies TEKS mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:

TEKS	Module	Lessons
2.10A	N/A	N/A
2.10B	ADSY	22–23
2.10C	N/A	N/A
2.10D	N/A	N/A

Personal Financial Literacy

The student applies TEKS mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:

TEKS	Module	Lessons
2.11A	N/A	N/A
2.11B	N/A	N/A
2.11C	N/A	N/A
2.11D	N/A	N/A
2.11E	N/A	N/A
2.11F	N/A	N/A



Manipulatives and Supplies Lists

GRADE 2 MANIPULATIVES LIST		
Qty.	Item(s)	Description
1	100-bead Rekenrek	
1	Base ten block set	<i>(flats, rods, and units); optional</i>
48	Base ten hundred flat	<i>(2 per student); optional</i>
240	Base ten, ten rods	<i>(10 per student); optional</i>
288	Base ten unit cubes	<i>(12 per student); optional</i>
500	Centimeter cubes	<i>(20 per student, 20 per teacher)</i>
24	Clocks	optional template in Module 8 Lesson 14
150	Counting bears	<i>(6 per student, 6 per teacher)</i>
1	Demonstration clock	
24	Dot dice	
24	Geoboards	<i>(1 per student, 1 per teacher)</i>
1	Geometric solid set	optional
1	Linking cubes	<i>assorted colors (class set)</i>
12	Meter sticks	<i>(1 per student pair)</i>
12	Money sets	
12	Numeral die	
3	Pattern block sets	
24	Rulers	<i>inch and metric</i>
600	Square inch tiles	<i>(25 per student)</i>
3000	Straws	<i>or sticks</i>
25	Tangram sets	optional template in Module 8 Lesson 6
13	Tape measures	<i>(1 per student pair, 1 per teacher)</i>
1000	Two-color counters	<i>(40 per student, 40 per teacher)</i>
1	Whole number place value cards	
24	Whole number place value disks	<i>(ones, tens, hundreds, 1 set per student)</i>
12	Yardstick	<i>(1 per student pair)</i>



GRADE 2 SUPPLIES LIST

Qty.	Item(s)	Description
150	Bags	<i>plastic, zip-top</i>
625	Beans	<i>dried, such as lima beans</i>
1	Binder	<i>3-ring</i>
3	Boxes of spaghetti	<i>uncooked</i>
24	Brad fasteners	<i>small</i>
1	Can	<i>empty, soup-sized</i>
24	Cardstock	<i>white</i>
1	Chart paper pad	
2	Colored pencils	<i>boxes</i>
1	Container	<i>opaque</i>
100	Crayons	<i>used, various lengths</i>
1	Digital clock	
1	Document camera	
24	Dry erase markers	
24	Erasers	<i>wedge, unused</i>
24	Highlighters	
144	Index cards	<i>3 in × 5 in (6 per student)</i>
144	Index cards	<i>large (2 per student)</i>
24	Markers	
2	Markers	<i>for posters</i>
24	Math journals	<i>or blank paper</i>
130	Meters of ribbon	<i>or string, 2 different colors</i>
1	Paper bag	
204	Paper clips	<i>large</i>
180	Paper clips	<i>small</i>
1	Paper strip	<i>1 in × 12 in</i>
1	Paper strip	<i>1 cm × 12 cm</i>
24	Pencils	<i>unsharpened</i>
2	Pencil boxes	
24	Personal white boards	<i>Build from 1 white cardstock, 1 red cardstock, and 1 sheet protector per student</i>
24	Place value charts	



GRADE 2 SUPPLIES LIST

Qty.	Item(s)	Description
1	Pocket Chart	
1	Ream of paper	
1	Roll of tape	<i>masking</i>
200	Rubber bands	
24	Scissors	
13	Sentence strips	
24	Sets of crayons	<i>(2 unused crayons per student)</i>
1	Sheet of butcher paper	<i>30 in × 10 in</i>
12	Sheets of colored paper	
24	Sheets of construction paper	<i>12 in × 18 in</i>
24	Sheets of dark construction paper	
24	Sheets of grid paper	<i>centimeter</i>
4	Shoeboxes	<i>4 lids of similar size, joined to create a place value chart</i>
2	Sticky Notes	<i>Packs</i>
24	Tag boards	<i>12 in × 12 in and 30 cm × 5 cm or sentence strips, 12 in × 2 in</i>
600	Toothpicks	

ADSY ITEMS

Qty.	Item(s)	Description
—	Cuisenaire rods	<i>or fraction strips</i>
24	Pocket charts	<i>(1 per student)</i>
24	Two-dimensional shapes or polygons	<i>(triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons, nonagons, decagons, 11-gons, dodecagons) (1 set per student)</i>



Grade 2 Module 1

Tips for Families

Key Concepts Overview

Focus TEKS: **2.4A, 2.4B, 2.4C, 2.7C**

The focus of Module 1 is to develop fluency as students add and subtract numbers up to 100 using place value understanding, properties of operations, and the relationship between addition and subtraction. Your student will:

- ☐ Review and build upon familiar skills from Kindergarten and Grade 1 such as breaking apart a total, identifying partners to 10, and adding ten plus facts.
- ☐ Use number bonds to **make a ten** when adding numbers up to 100 and **take from ten** when subtracting numbers up to 100 to make simpler problems.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

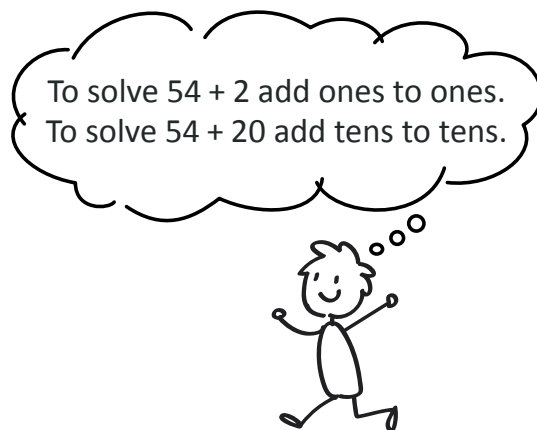
Additional Ways to Help at Home

- If your student would benefit from using concrete objects for support, provide pennies (or other counters) to help him break apart numbers. The use of fingers is also encouraged!
- When completing homework, encourage your student to explain how she knows the correct answer. For example, "I know that $10 - 7 = 3$, so that means $10 - 3 = 7$. Three and seven are parts and 10 is the total."
- Practice counting the Say Ten way. Say a two-digit number (e.g., 23 or 37), and ask your student to repeat it the Say Ten way (2 tens 3; 3 tens 7). For fun, invite your student to say some numbers for you to repeat the Say Ten way.
- Help your student practice saying addition sentences for teen numbers when one addend is 10. Alternate between the regular way and the Say Ten way. For example, you say "ten 2", and your student will say " $10 + 2 = 12$." Alternatively, you say "thirteen", and your student will say " $10 + 3 = 13$."
- Encourage your student to explain one strategy he can use to solve a problem. For example, "I know that $61 + 20 = 81$ because 20 is 2 tens. I started with 61 and I counted on 2 tens: 61, 71, 81."
- Play the "Make the Next Ten" game with your student. Player A calls out a number (e.g., 28). Player B tells how many ones are needed to make the next ten, and then says the number sentence ($2; 28 + 2 = 30$).
- Play the "Take out 10" game with your student. Player A calls out a number (e.g., 67). Player B takes out 10, states the remaining part (57), and provides a related number sentence ($67 - 10 = 57$, or $57 + 10 = 67$).



Terms

Like units: units that are the same



Make ten and take from ten: Make ten is an addition strategy where you decompose one of the addends to make a unit of ten with the other addend. Take from ten is a subtraction strategy where you subtract a number from a unit of ten.

$$9 + 6 = 15$$

$$\begin{array}{c} 1 \quad 5 \\ 9 + 1 = 10 \\ 10 + 5 = 15 \end{array}$$

make ten

$$11 - 9 = 2$$

$$\begin{array}{c} 1 \quad 10 \\ 10 - 9 = 1 \\ 1 + 1 = 2 \end{array}$$

take from ten

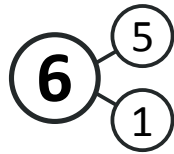
Say Ten counting: a way of counting; say the number of tens and ones. Say Ten counting can also include hundreds; for example: 12 tens 3 or 1 hundred 2 tens 3 for 123.

Regular	Say Ten
fifty-one	5 tens 1
sixty-seven	6 tens 7
seventy-five	7 tens 5
eighty-four	8 tens 4
ninety-five	9 tens 5



Models

Number Bond



5-Group Column



Quick Ten and Ones (vertical line representing a unit of ten)



Place Value Chart

(a labeled chart used to organize units according to place value)

tens	ones



Grado 2 Módulo 1

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **2.4A, 2.4B, 2.4C, 2.7C**

El enfoque del Módulo 1 es desarrollar la fluidez a medida que los estudiantes suman y restan números hasta el 100 usando la comprensión del valor de posición, las propiedades de las operaciones y la relación entre la suma y la resta. Se espera que su estudiante:

- Revise y desarrolle sobre las destrezas conocidas de Kindergarten y 1er grado, como dividir un total, identificar parejas de diez y sumar operaciones de diez más.
- Use vínculos numéricos para **hacer decenas** al sumar números hasta el 100 y **tomar de diez** al restar números hasta el 100 para hacer problemas más simples.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Si su estudiante se beneficiaría del uso de objetos concretos como apoyo, provea monedas de 1 centavo (u otras fichas) para ayudarlo a separar los números. ¡También puede animarlo a usar los dedos!
- Al completar la tarea, anime a su estudiante a explicar cómo sabe la respuesta correcta. Por ejemplo: "Sé que $10 - 7 = 3$, eso significa que $10 - 3 = 7$. El tres y el siete son partes y el 10 es el entero".
- Practique contando de la manera Decir decenas. Diga un número de dos dígitos (por ejemplo, 23 o 37) y pídale a su estudiante que lo repita de la manera Decir decenas (2 decenas 3; 3 decenas 7). Para divertirse, pida a su estudiante que diga algunos números para que usted repita la manera de Decir decenas.
- Ayude a su estudiante a practicar cómo decir oraciones de suma para números del 11 al 19 cuando un sumando es 10. Alterne entre la manera regular y la manera Decir decenas. Por ejemplo, usted dice "diez 2" y su estudiante dirá " $10 + 2 = 12$ ". Alternativamente, usted dice "trece" y su estudiante dirá " $10 + 3 = 13$ ".
- Anime a su estudiante a explicar una estrategia que puede usar para resolver un problema. Por ejemplo: "Sé que $61 + 20 = 81$ porque 20 son 2 decenas. Empecé con 61 y conté a partir de 2 decenas: 61, 71, 81".
- Juegue "Haz la siguiente decena" con su estudiante. El Jugador A dice un número (p. ej., 28). El Jugador B dice cuántos unos se necesitan para hacer la siguiente decena y luego dice la oración numérica ($28 + 2 = 30$).
- Juegue "Saca 10" con su estudiante. El Jugador A dice un número (p. ej., 67). El Jugador B saca 10, dice la parte restante (57) y provee una oración numérica relacionada ($67 - 10 = 57$, o $57 + 10 = 67$).

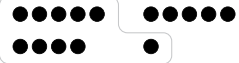


Términos

Decir decenas contando: una manera de contar; di el número de decenas y unidades. Decir decenas contando también puede incluir centenas; por ejemplo: 12 decenas 3 o 1 centena 2 decenas 3 para 123.

Regular	Say Ten
cincuenta y uno	5 decenas 1
sesenta y siete	6 decenas 7
setenta y cinco	7 decenas 5
ochenta y cuatro	8 decenas 4
noventa y cinco	9 decenas 5

Hacer grupos de diez y tomar de diez: Hacer grupos de diez es una estrategia de suma en la que descompones uno de los sumandos para hacer una unidad de diez con el otro sumando. Tomar de diez es una estrategia de resta en la que restas un número de una unidad de diez.



$$9 + 6 = 15$$

$$\begin{array}{r} 10 \\ 1 \quad 5 \\ 9 + 1 = 10 \\ 10 + 5 = 15 \end{array}$$



$$11 - 9 = 2$$

$$\begin{array}{r} 10 \\ 1 \quad 10 \\ 10 - 9 = 1 \\ 1 + 1 = 2 \end{array}$$

hacer diez

resta $10 - 9 = 1$.
luego suma las partes
que quedan. $1 + 1 = 2$



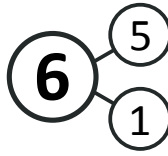
Unidades semejantes: unidades que son iguales

Para resolver $54 + 2$ suma unidades con unidades.
Para resolver $54 + 20$ suma decenas con decenas.



Modelos

Vínculo numérico



Columna de grupos de 5



Decena rápida y unidades (línea vertical que representa una unidad de diez)

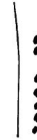


Tabla de valor de posición

(una tabla etiquetada que se usa para organizar las unidades según el valor de posición)

decenas	unidades



Grade 2 Module 2

Tips for Families

Key Concepts Overview

Focus TEKS: **2.9A, 2.9B, 2.9D, 2.9E**

The focus of Module 2 is to deepen students' understanding of measurement and to relate addition and subtraction to length. Your student will:

- ☐ Learn how to measure using centimeter cubes.
- ☐ Practice the *mark and move forward* technique using just one cube.
- ☐ Measure objects with tools such as centimeter rulers, measuring tapes, and meter sticks.
- ☐ **Estimate** using mental **benchmarks**.
- ☐ Use different **length units** such as paper clips, crayons, and other everyday objects to measure and compare lengths.
- ☐ Reason about the relationship between unit size and measurement. For example, “**Centimeters** are smaller than **meters**, so it takes more centimeters than meters to measure this table.”
- ☐ Solve addition and subtraction word problems involving length.
- ☐ Use the ruler as a **number line** and draw **strip diagrams** to compare lengths.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

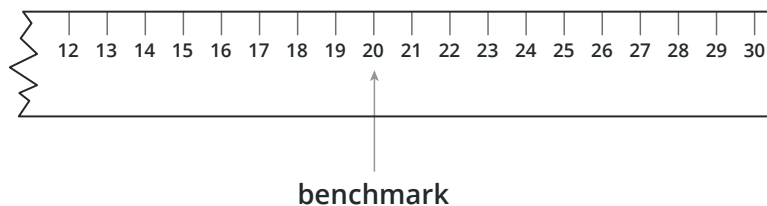
- Look for practical opportunities for your student to use measurement skills at home. For example, ask, “Will the rug fit in this room?” or “How far away should we put the basketball hoop?” Encourage your student to measure by placing nonstandard units, such as shoes, end to end with no gaps or overlaps. As an alternative, your student might use a standard measurement tool such as a ruler or meter stick.
- Invite your student to estimate the lengths of different objects and to share their reasoning and benchmarks. For example, “I estimate that the table is about one meter high because it is a little bit lower than the doorknob, which I know is about one meter high!”
- Use your student's handmade centimeter ruler to practice addition up to 30. Player A calls out two numbers (e.g., 9 and 5). Player B uses the ruler to add the two numbers by sliding a finger up the ruler: “I start at 9, and I slide my finger five spaces. I stop at 14 because $9 + 5 = 14$.”
- Count by 10 centimeters with your student. When you reach 100 centimeters, change to meters and centimeters. For example, “...70 centimeters, 80 centimeters, 90 centimeters, 1 meter, 1 meter 10 centimeters, 1 meter 20 centimeters, 1 meter 30 centimeters, 1 meter 40 centimeters,” and so on.



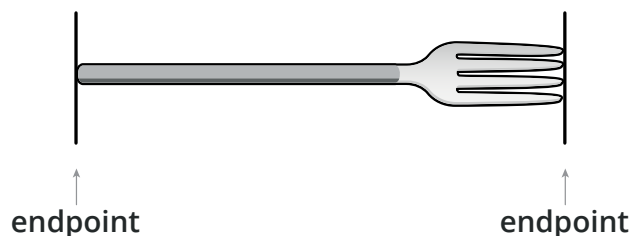
- Play the game “Which is Shorter?” with your student. Player A says two lengths (e.g., 6 centimeters and 10 centimeters). Player B tells which length is shorter (6 centimeters). For an added challenge, ask your student to compare different units (e.g., 6 meters and 10 centimeters). Take turns being Player A and Player B.
- As your student draws a strip diagram to solve a word problem, ask questions such as, “How did you label each part of your drawing?” “Which strip is longer?” and “How did you show the difference in lengths (shorter/longer) in your drawing?”

Terms

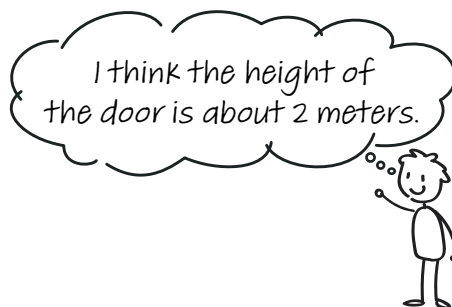
Benchmark: a number that is said when skip-counting by 10 and starting at 0, such as 10, 20, 30, 40, 50, 60, etc.



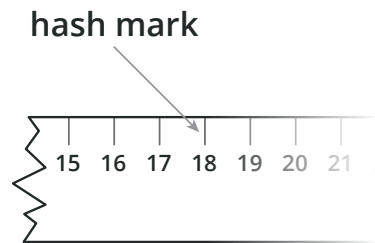
Endpoint: a point where something begins or ends



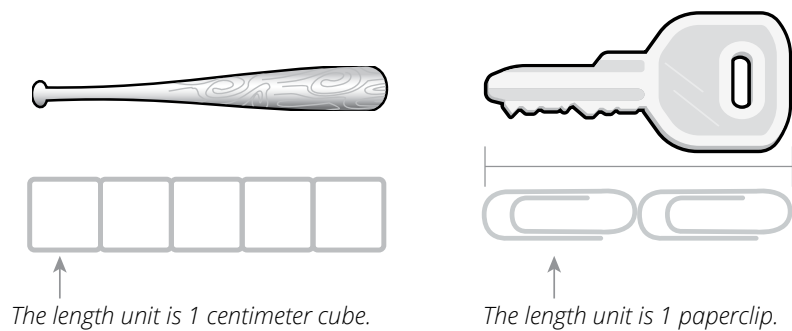
Estimate (Estimar): a thoughtful guess



Hash mark: a mark on a ruler or other measurement tool

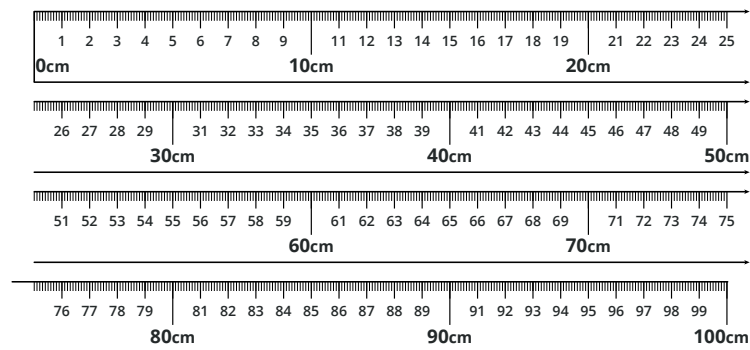


Length unit: the equal-sized units that tell us what we are measuring by

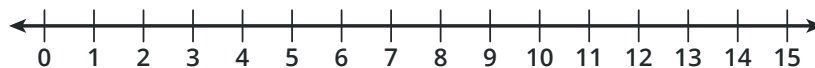


Models

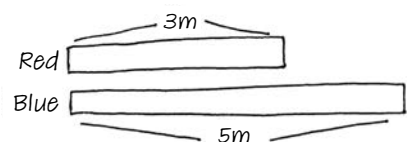
Meter Stick or Strip



Number Line



Strip Diagram



Grado 2 Módulo 2

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **2.9A, 2.9B, 2.9D, 2.9E**

El enfoque del Módulo 2 es profundizar la comprensión de los estudiantes de la medición y relacionar la suma y la resta con la longitud. Se espera que su estudiante:

- ☐ Aprenda a medir usando cubos de centímetros.
- ☐ Practique la técnica de marca y avanza usando un solo cubo.
- ☐ Mida objetos con herramientas como reglas de centímetros, cintas métricas y metros.
- ☐ **Haga estimaciones** usando **puntos de referencia** mentales.
- ☐ Use diferentes **unidades de longitud**, como clips, crayones y otros objetos diarios, para medir y comparar longitudes.
- ☐ Razone sobre la relación entre el tamaño de la unidad y la medida. Por ejemplo, “Los **centímetros** son más pequeños que los **metros**, por lo que se necesitan más centímetros que metros para medir esta mesa”.
- ☐ Resuelva problemas escritos de suma y resta que involucran longitud.
- ☐ Use la regla como una **recta numérica** y dibuje **diagramas de tiras** para comparar longitudes.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

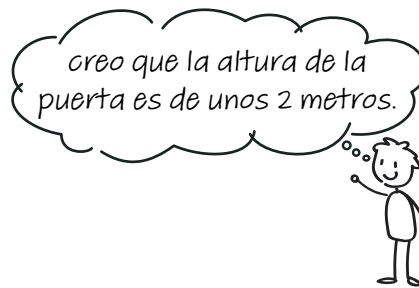
- Busque oportunidades prácticas para que su estudiante use las destrezas de medición en casa. Por ejemplo, pregunte: “¿Cabe la alfombra en este cuarto?” o “¿A qué distancia debemos colocar la canasta de básquetbol?”. Anime a su estudiante a medir colocando unidades no estandarizadas, como zapatos, de extremo a extremo sin separaciones y sin encimarse. Como alternativa, su estudiante podría usar una herramienta de medición estandarizada, como una regla o un metro.
- Invite a su estudiante a estimar las longitudes de diferentes objetos y a compartir su razonamiento y puntos de referencia. Por ejemplo: “Estimo que la mesa mide aproximadamente un metro de altura porque es un poco más baja que la perilla de la puerta, que sé que tiene aproximadamente un metro de altura”.
- Use la regla de centímetros hecha a mano por su estudiante para practicar la suma hasta el 30. El Jugador A dice dos números (p. ej., 9 y 5). El Jugador B usa la regla para sumar los dos números deslizando un dedo hacia arriba de la regla: “Empiezo en 9 y deslizo mi dedo cinco espacios. Me detengo en 14 porque $9 + 5 = 14$ ”.
- Cuente de 10 en 10 centímetros con su estudiante. Cuando llegue a 100 centímetros, cambie a metros y centímetros. Por ejemplo, “... 70 centímetros, 80 centímetros, 90 centímetros, 1 metro, 1 metro 10 centímetros, 1 metro 20 centímetros, 1 metro 30 centímetros, 1 metro 40 centímetros”, y así sucesivamente.



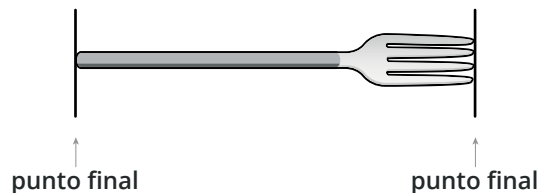
- Juegue "¿Cuál es más corto?" con su estudiante. El Jugador A dice dos longitudes (p. ej., 6 centímetros y 10 centímetros). El Jugador B indica qué longitud es más corta (6 centímetros). Para un desafío adicional, pida a su estudiante que compare diferentes unidades (p. ej., 6 metros y 10 centímetros). Tórnense para ser el Jugador A y el Jugador B.
- Mientras su estudiante dibuja un diagrama de tiras para resolver un problema escrito, haga preguntas como: "¿Cómo etiquetaste cada parte de tu dibujo?", "¿Qué tira es más larga?" y "¿Cómo mostraste la diferencia de longitudes (más cortas/más largas) en tu dibujo?".

Términos

Estimar (*Estimate*): una suposición razonada.

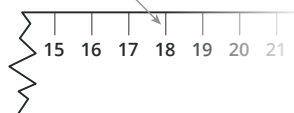


Extremo: un punto donde algo comienza o termina.

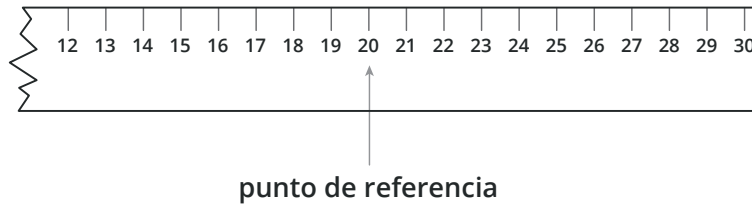


Marca: una marca en una regla u otra herramienta de medición

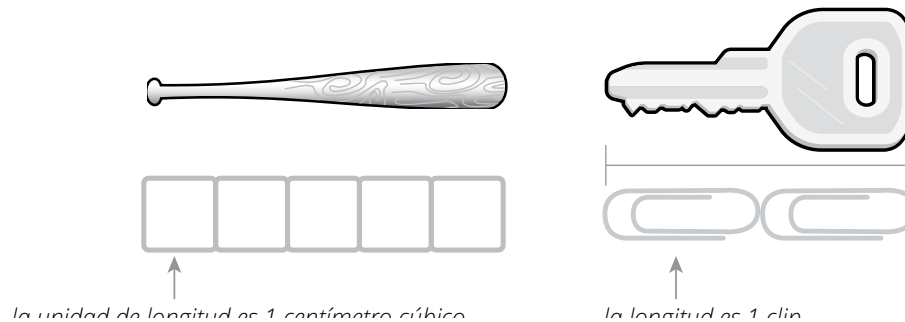
marca interna



Punto de referencia: un número que se dice cuando se cuenta saltando números de 10 en 10 y empezando en 0, como 10, 20, 30, 40, 50, 60, etc.

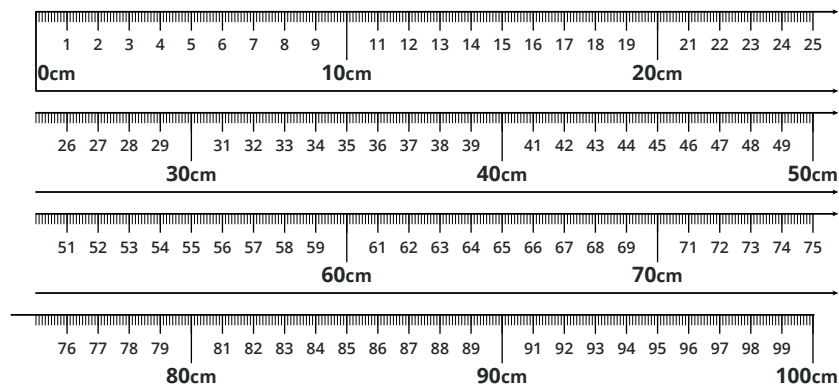


Unidad de longitud: las unidades de igual tamaño que nos dicen por qué estamos midiendo.



Modelos

Regla de un metro



Recta numérica

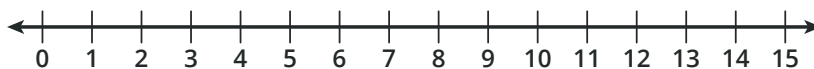
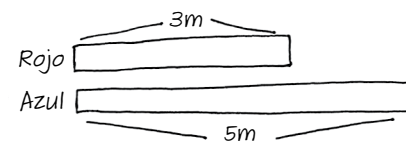


Diagrama de tiras



Grade 2 Module 3

Tips for Families

Key Concepts Overview

Focus TEKS: **2.2A, 2.2B, 2.2C, 2.2D, 2.2E**

The focus of Module 3 is developing place value understanding of numbers up to 1,200 and applying that understanding by using concrete and pictorial models, comparing and ordering numbers, and representing numbers using standard, expanded, and word forms. Your student will:

- ☐ Develop knowledge of **place value units** of ones, tens, and hundreds and the new unit of a thousand.
- ☐ Learn to **skip-count** efficiently by reaching a **benchmark number**—a ten or a hundred.
- ☐ Explore the value of three-digit numbers and learn to name numbers in **standard, unit, expanded, and word form**.
- ☐ Deepen place value understanding by drawing comparisons between ones, tens, and hundreds, and \$1, \$10, and \$100 bills.
- ☐ Exchange units of equal value, for example, 30 ones for 3 tens, or 4 hundreds for 40 tens.
- ☐ Compare and order whole numbers by using the words *greater than*, *less than*, or *equal to* as well as the comparison symbols ($>$, $<$, $=$).
- ☐ Identify 1, 10, or 100 more or less than a given number.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

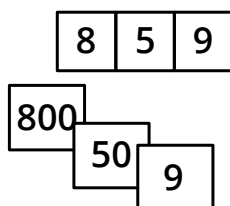
- Encourage your student to practice skip-counting by tens and by hundreds, up to 1,000, starting at any number. When your student begins demonstrating strong, consistent abilities, ask him to name the ending number in unit form as well as in standard form.
- Practice counting in unit form. Player A says a number (e.g., 234), and Player B repeats it in unit form (2 hundreds 3 tens 4 ones). Take turns with your student being Player A and Player B.
- Play board games that incorporate counting money. Focus particularly on \$1, \$10, and \$100 bills.
- Use board game money to show a three-digit value (e.g., 243). Have your student use standard form (243), unit form (2 hundreds 4 tens 3 ones), and expanded form to name the value. Vary the order of the bills so your student can practice unit form and expanded form out of unit order (e.g., 4 tens 3 ones 2 hundreds; $40 + 3 + 200 = 243$).
- Encourage your student to solve problems (e.g., $37 + 8$) by using the make ten addition strategy. Then ask her to explain the solution strategy. For example, "I know that 37 needs 3 to make 40, and I can break 8 into 3 and 5. My new, simpler problem is $40 + 5$, which is 45."



- Play the “Guess My Number” game with your student. Think of a number, but don’t tell your student. Give clues such as using 1 more, 10 more, 100 more, 1 less, 10 less, or 100 less to help your student determine the mystery number. As he becomes more proficient, use clues that challenge him to cross the hundred. For example, “My number is 10 less than 402,” or “My number is 10 more than 392.”

Terms

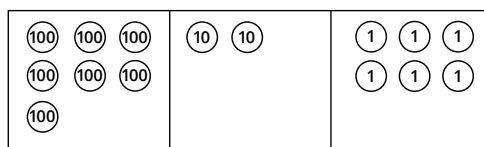
Base ten numerals (*Números de base diez*): numbers that are represented by the following ten digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9



Expanded form (*Forma desarrollada*): a way of writing a number that shows the value of each digit in that number

$$100 + 20 + 4 = 124$$

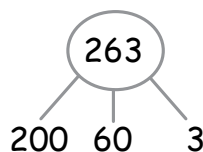
Place value or number disk (*Valor de posición o disco numérico*): a circular disk that represents 1, 10, 100, or 1,000 and helps you understand the value of a digit



Standard form (*Forma estandarizada*): a way of writing a number that shows only the digits in that number

120

Unit form (*Forma unitaria*): a way of writing a number that shows how many of a unit



Unit form → 2 hundreds 6 tens 3 ones

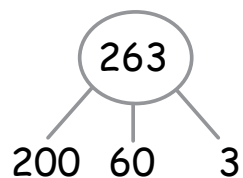


Word form: a way of writing a number using only words

1	one	11	eleven	10	ten
---	-----	----	--------	----	-----

Models

Number Bond



Place Value Chart

Thousands	Hundreds	Tens	Ones
	3	4	2



Grado 2 Módulo 3

Consejos para las familias

Concepto general de los conceptos clave

TEKS de enfoque: **2.2A, 2.2B, 2.2C, 2.2D, 2.2E**

El enfoque del Módulo 3 es desarrollar la comprensión del valor de posición de los números hasta el 1,200 y aplicar esa comprensión mediante el uso de modelos concretos y pictóricos, comparando y ordenando números, y representando números usando las formas estándar, desarrollada y escrita. Se espera que su estudiante:

- ☐ Desarrolle el conocimiento de las **unidades de valor de posición** de unidades, decenas y centenas y la nueva unidad de millar.
- ☐ Aprenda a **contar saltando números** de manera eficiente alcanzando un **número de referencia**: una decena o una centena.
- ☐ Explore el valor de los números de tres dígitos y aprenda a nombrar números en **forma estandarizada, unitaria, desarrollada y escrita**.
- ☐ Profundice la comprensión del valor de posición mediante comparaciones entre unidades, decenas y centenas, y billetes de \$1, \$10 y \$100.
- ☐ Intercambie unidades de igual valor, por ejemplo, 30 unidades por 3 decenas, o 4 centenas por 40 decenas.
- ☐ Compare y ordene números enteros usando las palabras *mayor que*, *menor que* o *igual a*, así como los símbolos de comparación ($>$, $<$, $=$).
- ☐ Identifique 1, 10 o 100 más o menos que un número determinado.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

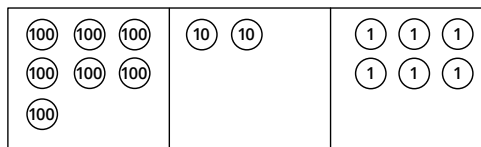
- Anime a su estudiante a practicar el contar saltando números de diez en diez, hasta el 1,000, comenzando en cualquier número. Cuando su estudiante comience a demostrar destrezas sólidas y consistentes, pídale que nombre el último número en forma unitaria, así como en forma estandarizada.
- Practique el contar en forma unitaria. El Jugador A dice un número (p. ej., 234) y el Jugador B lo repite en forma unitaria (2 centenas, 3 decenas, 4 unidades). Túrnense con su estudiante para ser el Jugador A y el Jugador B.
- Jueguen juegos de mesa que involucren el contar dinero. Concéntrense en los billetes de \$1, \$10 y \$100.
- Use el dinero del juego de mesa para mostrar un valor de tres dígitos (p. ej., 243). Pida a su estudiante que use la forma estandarizada (243), la forma unitaria (2 centenas, 4 decenas, 3 unidades) y la forma desarrollada para nombrar el valor. Varíe el orden de los billetes para que su estudiante pueda practicar la forma unitaria y la forma desarrollada en diferente orden (p. ej., 4 decenas 3 unidades 2 centenas; $40 + 3 + 200 = 243$).



- Anime a su estudiante a resolver problemas (por ejemplo, $37 + 8$) usando la estrategia de sumar Hacer grupos de diez. Luego pídale que explique la estrategia de solución. Por ejemplo: "Sé que 37 necesita 3 para hacer 40 y puedo separar 8 en 3 y 5. Mi nuevo problema, más simple, es $40 + 5$, que es 45".
- Juegue "Adivina mi número" con su estudiante. Piense en un número, pero no se lo diga a su estudiante. Dé pistas como usar 1 más, 10 más, 100 más, 1 menos, 10 menos o 100 menos para ayudar a su estudiante a determinar el número misterioso. A medida que se vuelve más competente, use pistas que lo desafíen a pasar el cien. Por ejemplo, "Mi número es 10 menor que 402" o "Mi número es 10 más que 392".

Términos

Disco de valor de posición o disco numérico (*Place value or number disk*): un disco circular que representa 1, 10, 100 o 1,000 y ayuda a entender el valor de un dígito



Forma desarrollada: una forma de escribir un número que muestra el valor de cada dígito en ese número

$$100 + 20 + 4 = 124$$

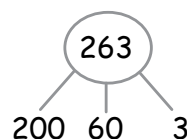
Forma escrita: una forma de escribir un número usando solo palabras

1	uno	11	once	10	diez
---	-----	----	------	----	------

Forma estandarizada (*Standard form*): una forma de escribir un número que muestra solo los dígitos de ese número

120

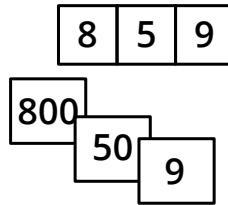
Forma unitaria (*Unit form*): una forma de escribir un número que muestra cuántos de una unidad



Unit forma de la unidad → 2 centenas 6 decenas 3 unidades



Números de base diez (*Base ten numerals*): números que se representan con los siguientes diez dígitos: 0, 1, 2, 3, 4, 5, 6, 7, 8 y 9



Modelos

Vínculo numérico

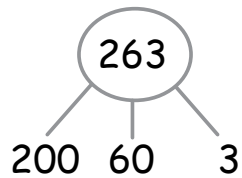


Tabla de valor de posición

miles	centenas	decenas	unos
	3	4	2



Grade 2 Module 4

Tips for Families

Key Concepts Overview

Focus TEKS: **2.4B, 2.4C, 2.4D, 2.7B, 2.7C**

In Module 4, students use their knowledge of place value and properties of operations to build fluency in two-digit addition and subtraction within 100, and to solve one- and two-step word problems within 100. This module also builds students' understanding of addition and subtraction of multi-digit numbers within 200. Your student will:

- ☐ Learn **simplifying strategies** to develop fluency.
- ☐ Learn how to add vertically with a focus on building lasting place value understanding.
- ☐ Model and record the steps of the **vertical form** by using **place value disks** on a place value chart.
- ☐ Use drawings of place value disks and the **chip model** to show place value concepts at work.
- ☐ Subtract vertically by aligning place value units.
- ☐ **Compose**, or bundle, tens and hundreds when adding.
- ☐ Use known facts, such as $5 + 8 = 13$ (5 ones + 8 ones = 13 ones), to solve more complex problems, such as $50 + 80 = 130$ (5 tens + 8 tens = 13 tens).
- ☐ Deepen their understanding of the repetitive nature of the subtraction **algorithm**, unbundling 1 hundred for 10 tens and 1 ten for 10 ones when necessary.
- ☐ Compare and discuss the various strategies for adding and subtracting up to 200.
- ☐ Learn about an addition method called **totals below**.
- ☐ Solve and create one- and two-step word problems.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

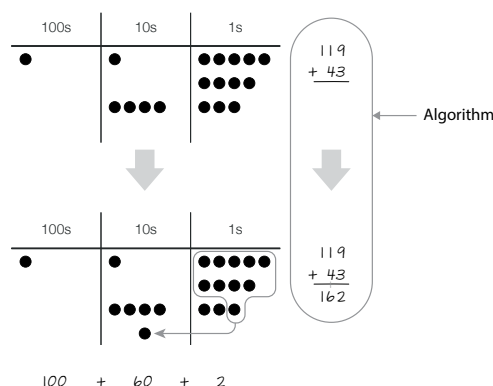
- Practice place value understanding by asking your student to tell how many ones, tens, and hundreds are in various numbers. For example, you say, "134," and your student responds, "4 ones, 3 tens, 1 hundred."
- Invite your student to find the missing part to make the next ten. For example, ask, "How much does 7 need to make 10?" (3) Then say, "Tell me the number sentence." ($7 + 3 = 10$) Continue with 17, 27, 37, and so on. Repeat this activity with other sequences, starting small and building to larger numbers up to 100.
- Encourage your student to explain what she is doing when solving problems to reinforce place value language. For example, ask, "How did you know you needed (or didn't need) to bundle in the ones place?" "I knew I needed to bundle in the ones place because 7 ones plus 5 ones equals 12 ones. That's 1 ten 2 ones."



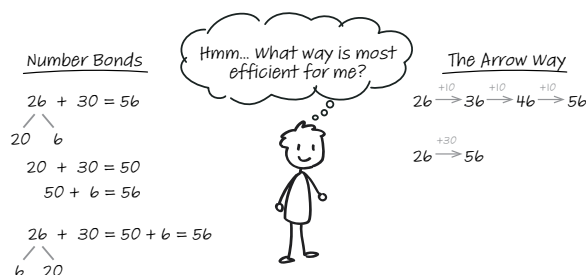
- Help your student practice knowing when to unbundle a ten by playing the game “Take from the Tens or Ones” with him. For example, if you say, “ $46 - 5$,” your student should say, “Take from the ones.” If you say, “ $46 - 7$,” your student should say, “Take from the tens.”
- When your student sees a number that is close to the next ten (one that ends in 7, 8, or 9), suggest she use a simplifying strategy rather than the vertical form. For example, to solve $58 + 63$, ask your student, “How can you make the next ten to solve a simpler problem?” ($60 + 61$).
- Use consistent language to help your student through the subtraction process. For example, to solve $172 - 56$, you might say, “Let’s look at the ones place first. Do you have enough ones to subtract 6 ones?” (No, because 6 ones are more than 2 ones.) “Where can you get more ones?” (From the tens place.) “Show what happens in the tens place.” (7 tens becomes 6 tens.) “How many ones do you have in the ones place now?” (12 ones.) Continue with, “Now, let’s look at the tens place. Do you have enough tens to subtract 5 tens?” (Yes, because there are 6 tens.) And so on. Encourage your student to use place value language to respond and have them record their work.

Terms

Algorithm (*Algoritmo*): a step-by-step procedure to solve a particular type of problem



Simplifying strategy (*Estrategia para simplificar*): a way of thinking about a problem that makes it simpler to find the value (e.g., to solve $26 + 30$, think $20 + 30 = 50$ and $50 + 6 = 56$)



Totals below: an addition strategy where the values of each of the digits in like places are added together and written below the line before being totaled

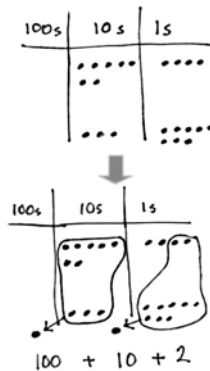
$$\begin{array}{r}
 125 \\
 + 75 \\
 \hline
 100 \\
 90 \\
 10 \\
 \hline
 200
 \end{array}
 \quad \text{or} \quad
 \begin{array}{r}
 125 \\
 + 75 \\
 \hline
 10 \\
 90 \\
 100 \\
 \hline
 200
 \end{array}$$

Models

Arrow Way

$$24 \xrightarrow{+40} 64 \xrightarrow{+7} 71$$

Chip Model



Place Value Disks



Grado 2 Módulo 4

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **2.4B, 2.4C, 2.4D, 2.7B, 2.7C**

En el Módulo 4, los estudiantes usan su conocimiento del valor de posición y las propiedades de las operaciones para desarrollar fluidez en suma y resta de números de dos dígitos hasta el 100 y para resolver problemas escritos de uno y dos pasos hasta el 100. Este módulo también desarrolla la comprensión de los estudiantes sobre la suma y la resta de números de múltiples dígitos hasta el 200. Se espera que su estudiante:

- ☐ Aprenda **estrategias para simplificar** para desarrollar fluidez.
- ☐ Aprenda a sumar verticalmente con un enfoque en desarrollar una comprensión duradera del valor de posición.
- ☐ Modele y anote los pasos de la **forma vertical** usando **discos de valor de posición** en una tabla del valor de posición.
- ☐ Use dibujos de discos de valor de posición y el **modelo de fichas** para mostrar los conceptos de valor de posición en acción.
- ☐ Reste verticalmente alineando las unidades de valor de posición.
- ☐ **Componga** o agrupe, decenas y centenas al sumar.
- ☐ Use operaciones conocidas, como $5 + 8 = 13$ (5 unidades + 8 unidades = 13 unidades), para resolver problemas más complejos, como $50 + 80 = 130$ (5 decenas + 8 decenas = 13 decenas).
- ☐ Profundice su comprensión de la naturaleza repetitiva del **algoritmo** de resta, separando 1 centena en 10 decenas y 1 decena en 10 unidades cuando sea necesario.
- ☐ Compare y hable de las diferentes estrategias para sumar y restar hasta el 200.
- ☐ Aprenda sobre un método de suma llamado **total abajo**.
- ☐ Resuelva y crea problemas escritos de uno y dos pasos.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

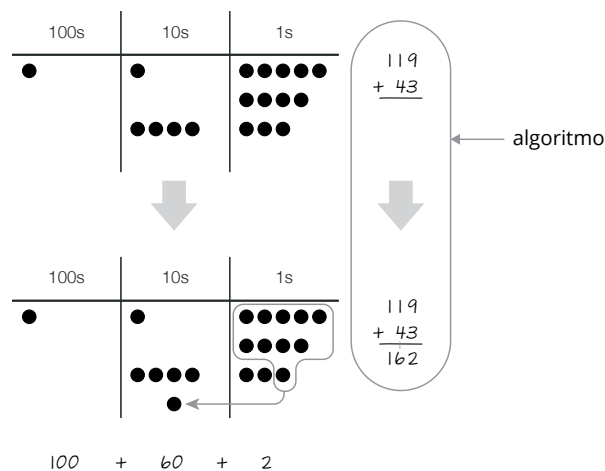
- Practique la comprensión del valor de posición pidiendo a su estudiante que diga cuántas unidades, decenas y centenas tienen varios números. Por ejemplo, usted dice: "134" y su estudiante dice: "4 unidades, 3 decenas, 1 centena".
- Invite a su estudiante a encontrar la parte que falta para hacer la siguiente decena. Por ejemplo, pregunte: "¿Cuántos necesita 7 para hacer 10?" (3). Luego, diga: "Dime la oración numérica". ($7 + 3 = 10$) Continúe con 17, 27, 37, y así sucesivamente. Repita esta actividad con otras secuencias, comenzando con algo pequeño y aumentando hasta números más grandes hasta el 100.



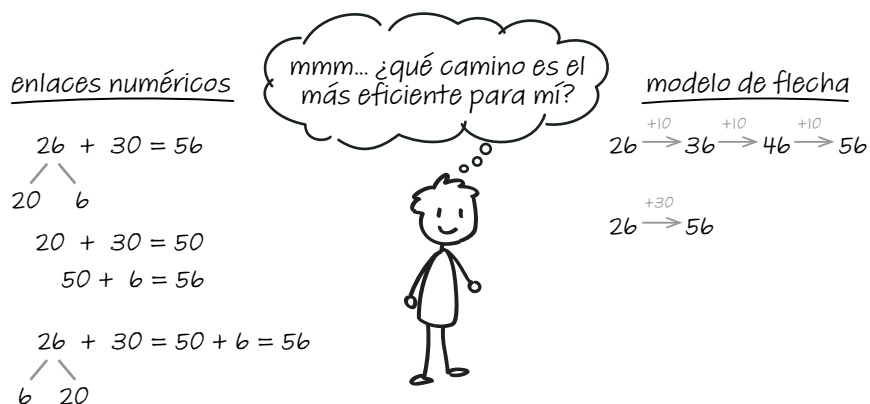
- Anime a su estudiante a explicar lo que está haciendo al resolver los problemas para reforzar el lenguaje de valor de posición. Por ejemplo, pregúntele: "¿Cómo supiste que debías (o no debías) agrupar en la posición de las unidades?", "Sabía que tenía que agrupar en la posición de las unidades porque 7 unidades más 5 unidades es igual a 12 unidades. Es decir, 1 decena, 2 unidades".
- Ayude a su estudiante a practicar cómo saber cuándo separar un diez jugando a "Tomar de las decenas o las unidades". Por ejemplo, si usted dice: "46 – 5", su estudiante debe decir: "Toma de las unidades". Si usted dice: "46 – 7", su estudiante debe decir: "Toma de las decenas".
- Cuando su estudiante vea un número que está cerca de la siguiente decena (uno que termine en 7, 8 o 9), sugiérale que use una estrategia para simplificar en lugar de la forma vertical. Por ejemplo, para resolver $58 + 63$, pregunte a su estudiante: "¿Cómo puedes hacer la siguiente decena para resolver un problema más simple?" ($60 + 61$).
- Use un lenguaje coherente para ayudar a su estudiante a través del proceso de resta. Por ejemplo, para resolver $172 - 56$, podría decir: "Veamos primero la posición de las unidades. ¿Tienes suficientes para restar 6 unidades?" (No, porque 6 unidades son más que 2 unidades). "¿Dónde puedes conseguir más?" (De la posición de las decenas). "Muestra lo que ocurre en la posición de las decenas" (7 decenas se convierten en 6 decenas). "¿Cuántas tienes en la posición de las unidades ahora?" (12 unidades). Continúe con: "Ahora, veamos la posición de las decenas. ¿Tienes suficientes decenas para restar 5 decenas?" (Sí, porque hay 6 decenas). Y así sucesivamente. Anime a su estudiante a usar el lenguaje del valor de posición para contestar y pídale que registre su trabajo.

Términos

Algoritmo (Algorithm): un procedimiento paso a paso para resolver un tipo particular de problema



Estrategia para simplificar (*Simplifying strategy*): una forma de pensar en un problema que simplifica la búsqueda del valor (p. ej., para resolver $26 + 30$, pensar $20 + 30 = 50$ y $50 + 6 = 56$)



Totales abajo: una estrategia de suma en la que los valores de cada uno de los dígitos en posiciones similares se suman y se escriben debajo de la línea antes de sumarse

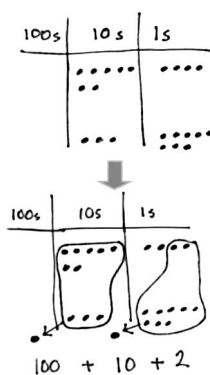
$$\begin{array}{r} 125 \\ + 75 \\ \hline 100 \\ 90 \\ 10 \\ \hline 200 \end{array} \quad \text{or} \quad \begin{array}{r} 125 \\ + 75 \\ \hline 10 \\ 90 \\ 100 \\ \hline 200 \end{array}$$

Modelos

Manera de flechas

$$24 \xrightarrow{+40} 64 \xrightarrow{+7} 71$$

Modelo de fichas



Discos de valor de posición



Grade 2 Module 5

Tips for Families

Key Concepts Overview

Focus TEKS: **2.4B, 2.4C, 2.4D, 2.7B**

In Module 5 students continue renaming place value units and extend their work with addition and subtraction algorithms to numbers within 1,000. Your student will:

- ☐ Model addition and subtraction with materials and drawings.
- ☐ Relate *100 more* and *100 less* to addition and subtraction of 100.
- ☐ Use simplifying strategies for addition and subtraction.
- ☐ Extend the *make a ten* strategy to make a hundred.
- ☐ Use **compensation** to subtract from three-digit numbers.
- ☐ Use place value language to explain why strategies work.
- ☐ Add two- and three-digit numbers up to 1,000 by bundling, or composing, units to make a new ten or a new hundred.
- ☐ Subtract two- and three-digit numbers up to 1,000 by decomposing (i.e. unbundling) tens and hundreds.
- ☐ Solve and create one- and two-step word problems involving addition and subtraction.
- ☐ Choose which strategy is most efficient for a given problem, understanding that the strategies they used with one-step problems also work with multi-step word problems.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Encourage your student to use place value language to explain how adding in the tens place is like adding in the ones place. "When I have a group of 10 ones, I can make a group of 1 ten. When I have a group of 10 tens, I can make a group of 1 hundred."
- Before your student adds or subtracts, ask her to look closely at the numbers and think aloud about which strategy will be most efficient and why. For example, she might choose to use the arrow way, number bonds, counting on, or vertical form to solve.
- Invite your student to explain his simplifying strategy step-by-step. For example, when he uses the arrow way, ask your student questions such as, "How many more do you need to make the next hundred? The next ten?" and "Which did you add first: hundreds, tens, or ones? Why?"
- Ask your student the following questions as she completes her homework: "Do you have enough ones or tens to bundle?" "Where do you record the new ten or hundred in the chip model?" "How do we show this change when using vertical form?" As your student becomes more confident, invite her to show and explain the two models.



- Encourage your student to think carefully about the numbers in a given problem before choosing a strategy. Ask him to look for numbers that are close to the next hundred or numbers from which it would be more efficient to count on. For example, he might notice that counting on is another way to solve the problem $(802 - 698)$: $698 + 2 = 700$; $700 + 100 = 800$; $800 + 2 = 802$. By counting on 104 ($2 + 100 + 2$), your student is using addition to solve the subtraction problem.
- If your student has not yet mastered certain strategies, encourage her to solve a problem by using a familiar strategy first. Then, present the challenge of solving the same problem by using a strategy she is working to master.

Terms

Compensation (*Compensación*): a simplifying strategy where students add or subtract the same amount to or from both numbers to create an equivalent, but simpler, problem

+1	321
----	-----

+1	199
----	-----

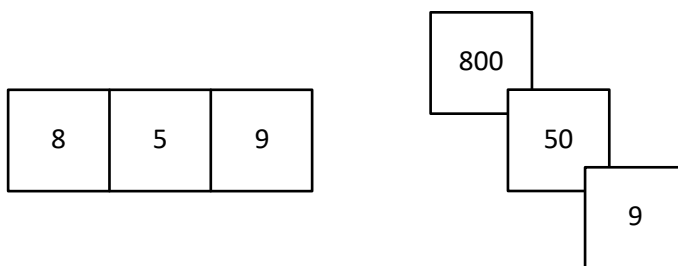
}
 ?

$$321 - 199 = 322 - 200 = 122$$

New groups below: a representation that shows newly composed units on the line below the appropriate place in the addition algorithm

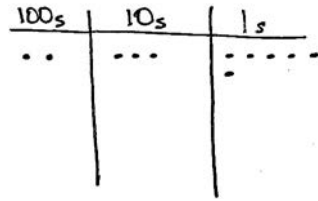
$$\begin{array}{r}
 427 \\
 + 385 \\
 \hline
 812
 \end{array}$$

Place value (*Valor de posición*): the value of a digit based on where it is located in a number



Models

Chip Model



Place Value Chart

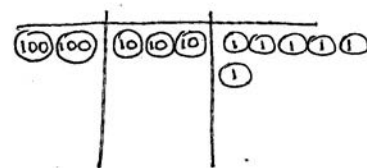
Place Value Chart Without Headings
(use with place value disks)

--	--	--

Place Value Chart with Headings
(use with numbers and chips)

hundreds	tens	ones
7	2	6

Place Value Disk Drawing



Grado 2 Módulo 5

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **2.4B, 2.4C, 2.4D, 2.7B**

En el Módulo 5, los estudiantes continúan cambiando el nombre de las unidades de valor de posición y extienden su trabajo con algoritmos de suma y resta hasta el 1,000. Se espera que su estudiante:

- ☐ Modele la suma y la resta con materiales y dibujos.
- ☐ Relacione *100 más* y *100 menos* con la suma y resta de 100.
- ☐ Use estrategias para simplificar sumar y restar.
- ☐ Extienda la estrategia de hacer decenas para hacer una centena.
- ☐ Use la **compensación** para restar de números de tres dígitos.
- ☐ Use el lenguaje del valor de posición para explicar por qué las estrategias funcionan.
- ☐ Sume números de dos y tres dígitos hasta el 1,000 agrupando, o componiendo, unidades para hacer una nueva decena o centena.
- ☐ Reste números de dos y tres dígitos hasta el 1,000 descomponiendo (separando) decenas y centenas.
- ☐ Resuelva y cree problemas escritos de uno y dos pasos que involucren sumas y restas.
- ☐ Escoja qué estrategia es la más eficiente para un problema dado, entendiendo que las estrategias que usaron con problemas de un solo paso también funcionan con problemas escritos de múltiples pasos.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Anime a su estudiante a usar el lenguaje del valor de posición para explicar que sumar en la posición de las decenas es como sumar en la posición de las unidades. "Cuando tengo un grupo de 10 unidades, puedo hacer un grupo de 1 decena. Cuando tengo un grupo de 10 decenas, puedo hacer un grupo de 1 centena".
- Antes de que su estudiante sume o reste, pídale que mire de cerca los números y piense en voz alta qué estrategia será más eficiente y por qué. Por ejemplo, puede optar por usar la manera de flechas, los vínculos numéricos, contar a partir de un número o la forma vertical para resolver.
- Invite a su estudiante a explicar paso a paso su estrategia para simplificar. Por ejemplo, cuando use la manera de flechas, pregunte a su estudiante: "¿Cuántos más necesitas para hacer la siguiente centena? ¿La siguiente decena?" y "¿Qué sumaste primero: centenas, decenas o unidades? ¿Por qué?".
- Haga las siguientes preguntas a su estudiante mientras completa su tarea: "¿Tienes suficientes unidades o decenas para agrupar?", "¿Dónde se registran las nuevas decenas o centenas en el



modelo de fichas?", "¿Cómo mostramos este cambio cuando usamos la forma vertical?". A medida que su estudiante se sienta más seguro, invítelo a mostrar y explicar los dos modelos.

- Anime a su estudiante a pensar cuidadosamente en los números en un problema dado antes de escoger una estrategia. Pídale que busque números que estén cerca de la siguiente centena o números con los que sería más eficiente contar. Por ejemplo, podría notar que contar a partir de un número es otra forma de resolver el problema ($802 - 698$): $698 + 2 = 700$; $700 + 100 = 800$; $800 + 2 = 802$. Al contar a partir de 104 ($2 + 100 + 2$), su estudiante está usando la suma para resolver el problema de resta.
- Si su estudiante aún no ha dominado ciertas estrategias, anímelo a resolver un problema usando primero una estrategia conocida. Luego, preséntele el desafío de resolver el mismo problema utilizando una estrategia que esté tratando de dominar.

Términos

Compensación (*Compensation*): una estrategia para simplificar en la que los estudiantes suman o restan la misma cantidad a ambos números para crear un problema equivalente, pero más simple

+1	321
----	-----

+1	199
----	-----

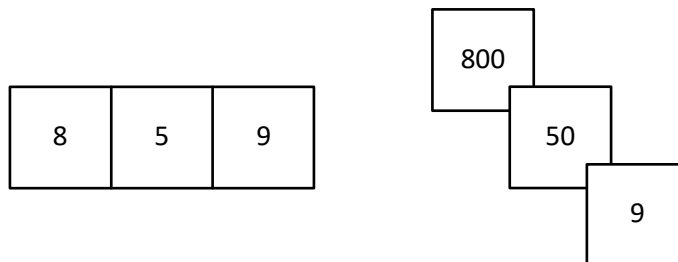
}
 ?

$$321 - 199 = 322 - 200 = 122$$

Nuevos grupos abajo: una representación que muestra las unidades recién compuestas en la línea debajo de la posición apropiada en el algoritmo de suma

$$\begin{array}{r}
 427 \\
 + 385 \\
 \hline
 812
 \end{array}$$

Valor de posición (*Place value*): el valor de un dígito basado en su ubicación en un número



Modelos

Modelo de fichas

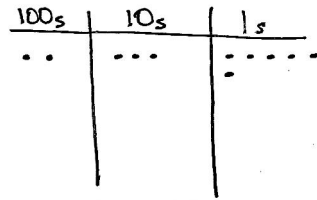


Tabla de valor de posición

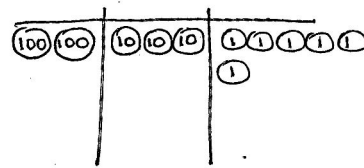
tabla de valor posicional sin encabezamientos
(usar con discos de valor posicional)

--	--	--

tabla de valor posicional con encabezamientos
(usar con números y fichas)

centenas	decenas	unos
7	2	6

Dibujo de discos de valor de posición



Grade 2 Module 6

Tips for Families

Key Concepts Overview

Focus TEKS: **2.6A, 2.6B, 2.7A, 2.9F**

In Module 6, students develop foundational understanding of multiplication and division. They also begin to build an understanding of area and the meaning of even and odd numbers. Your student will:

- ☐ Create equal groups using objects and drawings.
- ☐ Write **repeated addition** sentences to match drawings of equal groups.
- ☐ Draw strip diagrams to represent equal groups.
- ☐ Use equal groups to create **arrays** and describe the arrays in terms of **rows** and **columns**.
- ☐ Use arrays and strip diagrams to model and solve word problems.
- ☐ Use drawings and a number line to show division situations and relate them to **repeated subtraction**.
- ☐ Find the **area** of a rectangle by counting **square units**.
- ☐ Use square tiles and drawings to **compose** and **decompose** rectangular arrays to show equal rows and equal columns.
- ☐ Pair objects and skip-count by twos to investigate **even** and **odd numbers**.

You can use the checklist above to help monitor your student’s progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

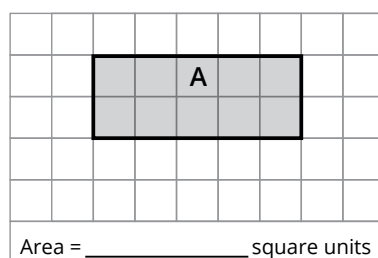
- Encourage your student to skip-count by twos and fives while he washes his hair, gets dressed, or does other daily chores. For example, ask him to start at zero and skip-count by fives up to 50 and then back to zero: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 45, 40, 35, 30, 25, 20, 15, 10, 5, 0. If your student shows proficiency of skip-counting by fives, challenge him to skip-count by threes and fours in preparation for Grade 3. To provide support, try starting the skip-counting and then encourage your student to join in.
- Give your student 12 counters (e.g., pennies, buttons). Invite her to form equal groups of counters. Ask, “How many equal groups are there? How many are in each group?” She might say, for example, “There are 2 groups of 6 pennies.” Then challenge her to make equal groups with the same number of pennies in a different configuration (e.g., 6 groups of 2, or 3 groups of 4).
- Look for arrays in your home or community, such as rows or columns of building blocks, cupcakes in a bakery, or windows on a building. Encourage your student to use the words *rows* or *columns* to describe how many are in the array; for example, “I see 4 rows of 3 cupcakes!” For an added challenge, invite your student to use a repeated addition equation to describe the array (e.g., $3 + 3 + 3 + 3 = 12$).



- Give your student up to 20 counters, such as pennies or beans. Invite him to arrange a given number of counters (e.g., 7 counters) in as many pairs as possible to determine whether the total number is even or odd. Ask your student to share his reasoning. For example, “The number 7 is not even because there’s a penny left over when I make pairs.”
- Practice Happy Counting with your student. Point up (to count up) or down (to count down) repeatedly and rhythmically to help your student practice skip-counting by twos or fives in a fun and energetic way. Consider Happy Counting by threes or fours when your student is ready for a bigger challenge.
- To prepare your student for working with money in Module 7, play the game “Coin Drop” with her. Gather 10 dimes and 30 pennies and a metal or plastic container. Invite your student to watch, listen carefully, and count mentally as you drop a certain number of pennies, one at a time, into the container. Increase the complexity for your student by dropping dimes and then a combination of dimes and pennies. After each round, ask, “How much money is in the can?” Count together to confirm the total.

Terms

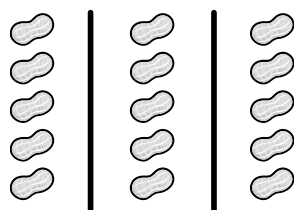
Area: (*Área*): the amount of two-dimensional space in a bounded region



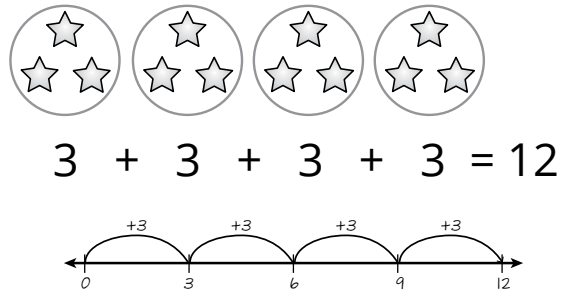
Array: an arrangement of objects in rows and columns



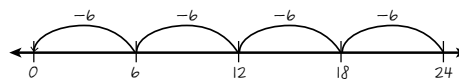
Columns (*Columnas*): the vertical groups in a rectangular array



Repeated addition: to add the same number over and over (e.g., $2 + 2 + 2$)



Repeated subtraction: to take away the same amount over and over again until you get to zero



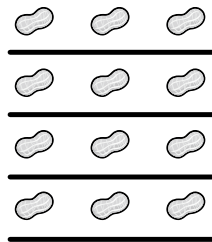
$$24 - 6 = 18$$

$$18 - 6 = 12$$

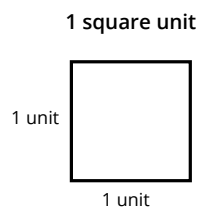
$$12 - 6 = 6$$

$$6 - 6 = 0$$

Rows: the horizontal groups in a rectangular array

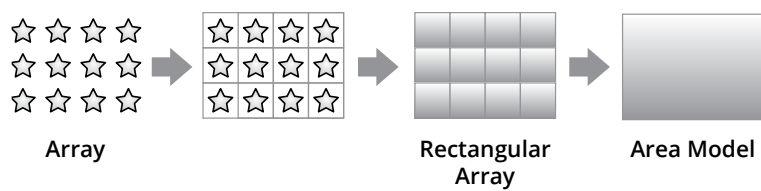


Square unit: a unit of area—specifically square centimeters, square inches, square feet, and square meters



Models

Area Model (*Modelo de área*)



Grado 2 Módulo 6

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **2.6A, 2.6B, 2.7A, 2.9F**

En el Módulo 6, los estudiantes desarrollan una comprensión fundamental de la multiplicación y la división. También comienzan a desarrollar una comprensión del área y el significado de los números pares e impares. Se espera que su estudiante:

- ☐ Cree grupos iguales usando objetos y dibujos.
- ☐ Escriba **oraciones de suma repetidas** para que correspondan con los dibujos de grupos iguales.
- ☐ Dibuje diagramas de tiras para representar grupos iguales.
- ☐ Use grupos iguales para crear matrices y describa las matrices en términos de **filas y columnas**.
- ☐ Use matrices y diagramas de tiras para modelar y resolver problemas escritos.
- ☐ Use dibujos y una recta numérica para mostrar problemas de división y relacionarlos con **la resta repetida**.
- ☐ Encuentre el **área** de un rectángulo contando **unidades cuadradas**.
- ☐ Use mosaicos cuadrados y dibujos para **componer y descomponer** matrices rectangulares para mostrar filas y columnas iguales.
- ☐ Relacione objetos y cuente saltando números de dos en dos para investigar **números pares e impares**.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

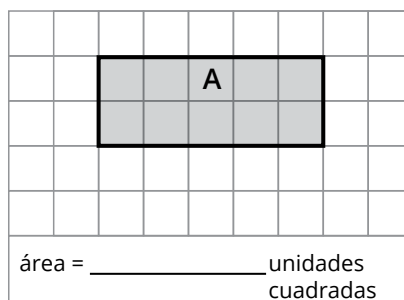
- Anime a su estudiante a contar saltando números de dos en dos y de cinco en cinco mientras se lava el cabello, se viste o hace otras tareas diarias. Por ejemplo, pídale que empiece de cero y que cuente saltando números de cinco en cinco hasta el 50 y luego regrese a cero: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 45, 40, 35, 30, 25, 20, 15, 10, 5, 0. Si su estudiante muestra destreza en contar saltando números de cinco en cinco, desafíelo a contar saltando números de tres en tres y de cuatro en cuatro en preparación para el 3er grado. Para apoyarlo, intente comenzar el conteo saltando números y luego anime a su estudiante a unirse.
- Entregue a su estudiante 12 fichas (p. ej., monedas de 1 centavo, botones). Invítelo a formar grupos iguales de fichas. Pregunte: "¿Cuántos grupos iguales hay? ¿Cuántos hay en cada grupo?". Podría decir, p. ej., "Hay 2 grupos de 6 monedas de 1 centavo". Luego, desafíelo a hacer grupos iguales con el mismo número de monedas de 1 centavo con un diseño diferente (p. ej., 6 grupos de 2 o 3 grupos de 4).
- Busque matrices en su casa o comunidad, como filas o columnas de bloques de construcción, pastelitos en una panadería o ventanas en un edificio. Anime a su estudiante a usar las palabras *filas* o *columnas* para describir cuántas hay en la matriz; por ejemplo, "¡Veo 4 filas de 3 pastelitos!". Como un desafío adicional, invite a su estudiante a usar una ecuación de suma repetida para describir la matriz (p. ej., $3 + 3 + 3 + 3 = 12$).



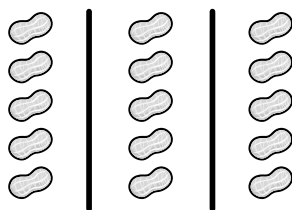
- Dele a su estudiante hasta 20 fichas, como monedas de 1 centavo o frijoles. Invítelo a arreglar un número determinado de fichas (p. ej., 7 fichas) en tantos pares como sea posible para determinar si el número total es par o impar. Pídale que comparta su razonamiento. Por ejemplo: "El número 7 no es par, porque me sobra una moneda de 1 centavo cuando formo pares".
- Practique el Conteo feliz con su estudiante. Señale hacia arriba (para contar hacia adelante) o hacia abajo (para contar hacia atrás) repetida y rítmicamente para ayudar a su estudiante a practicar el contar saltando números de dos en dos o de cinco en cinco de una manera divertida y enérgica. Considere el Conteo feliz de tres en tres o cuatro en cuatro cuando su estudiante esté listo para un desafío mayor.
- Para preparar a su estudiante para trabajar con dinero en el Módulo 7, Juegue "Deja caer la moneda" con él. Reúna 10 monedas de 10 centavos, 30 monedas de 1 centavo y un recipiente de metal o plástico. Invite a su estudiante a mirar, escuchar atentamente y contar mentalmente mientras usted deja caer una cierta cantidad de monedas, una a la vez, en el recipiente. Aumente la complejidad para su estudiante dejando caer monedas de diez centavos y luego una combinación de monedas de diez centavos y de 1 centavo. Después de cada ronda, pregunte: "¿Cuánto dinero hay en el recipiente?". Cuenten juntos para confirmar el total.

Términos

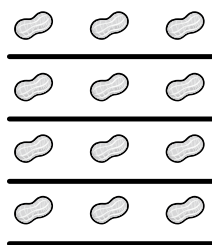
Área (Area): la cantidad de espacio de dos dimensiones en una región delimitada



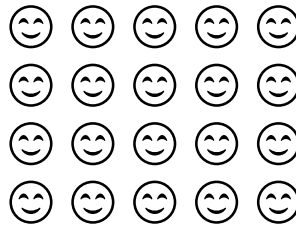
Columnas (Columns): los grupos verticales en una matriz rectangular



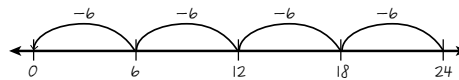
Filas: los grupos horizontales en una matriz rectangular



Matriz: un arreglo de objetos en filas y columnas



Resta repetida: quitar la misma cantidad una y otra vez hasta llegar a cero



$$24 - 6 = 18$$

$$18 - 6 = 12$$

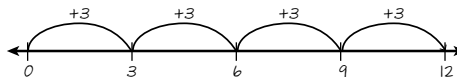
$$12 - 6 = 6$$

$$6 - 6 = 0$$

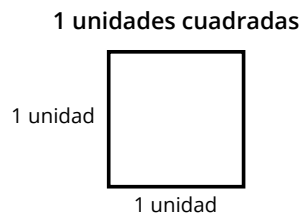
Suma repetida: sumar el mismo número una y otra vez (p. ej., $2 + 2 + 2$).



$$3 + 3 + 3 + 3 = 12$$

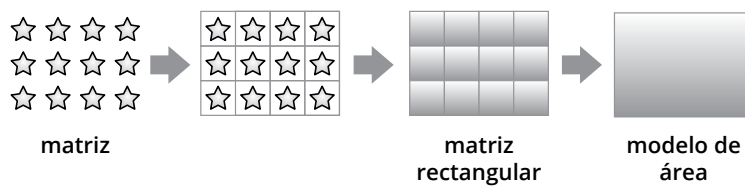


Unidad cuadrada: una unidad de área, específicamente centímetros cuadrados, pulgadas cuadradas, pies y metros cuadrados



Modelos

Modelo de área



Grade 2 Module 7

Tips for Families

Key Concepts Overview

Focus TEKS: **2.2E, 2.2F, 2.4A, 2.4B, 2.4C, 2.5A, 2.5B, 2.9A, 2.9B, 2.9C, 2.9D, 2.9E, 2.10A, 2.10B, 2.10C, 2.10D, 2.11A, 2.11B, 2.11C, 2.11D, 2.11E, 2.11F**

In Module 7, students use addition and subtraction strategies within 100 and problem-solving skills as they learn to work with various types of units within the contexts of length, money, and data. An exploration of personal financial literacy is also included in this module. Your student will:

- ☐ Learn to sort pictures and information into categories and to record that **data** in a **table**.
- ☐ Create and use **pictographs** and **bar graphs** to organize and represent a data set with up to 4 categories per graph.
- ☐ Count the total value of a group of coins, skip-counting by fives and tens as needed.
- ☐ Learn to make change from one dollar by using counting on and simplifying strategies (e.g., the arrow way).
- ☐ Solve one- and two-step word problems involving money and length.
- ☐ Consider saving as an alternative to spending and learn how money saved can grow into a larger sum over time.
- ☐ Compare **deposit** and **withdrawal**, **consumer** and **producer**, and **borrowing** and **lending**.
- ☐ Learn about the **inch** as a unit of length and understand that 12 inches form a larger unit called a **foot**.
- ☐ Measure using both customary units of length (e.g., inches, feet, **yards**) and metric units of length (e.g., centimeters, meters), choosing appropriate tools to measure each object efficiently.
- ☐ Generate mental benchmarks for customary units; for example, the width of a quarter is about 1 inch, and the length of a sheet of paper is about 1 foot.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Invite your student to create a pictograph for different types of coins. Give her a small handful of pennies, dimes, nickels, and quarters, and ask her to sort and organize the coins by type. Encourage your student to draw a pictograph on paper to represent how many of each type of coin are in the groups.
- Help your student practice making one dollar or making change from one dollar by asking him questions such as, "If I have 35¢, how much more do I need to have 100¢, or one dollar?" Give your student coins to show how he counts on to one dollar and challenge him to record his work by using the arrow way.



- Play an estimation game with your student. Challenge her to estimate the length of household objects, and then have her measure each object to see how close her estimate is to the actual measurement.
- Play the “Roll and Follow the Rule” game to help your student maintain or build fluency with addition and subtraction. Give your student a base number such as 9, and then have him roll a die to find the rule. (If a die is not available, the game may be played using a random number generator on a smart phone.) For example, if he rolls a 5, he adds 5 repeatedly: $9 + 5 = 14$, $14 + 5 = 19$, $19 + 5 = 24$. Have your student record as many number sentences as he can for 30 seconds and then switch to a different base number and roll the die for a new rule. Play again with subtraction, starting with a base number such as 40. For example, if your student rolls a 2, he subtracts 2 repeatedly: $40 - 2 = 38$, $38 - 2 = 36$, $36 - 2 = 34$.

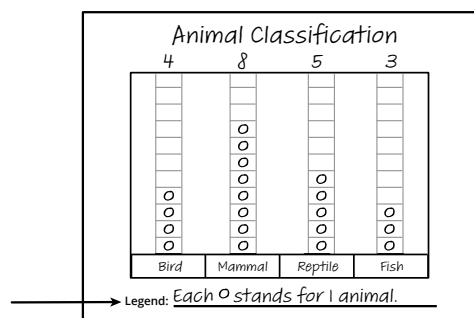
Terms

Consumer (*Consumidor*): a person who buys a product or a service

Data (*Datos*): a set of facts or pieces of information

Animal Habitats		
Arctic	Woodland	Ocean
4	10	6

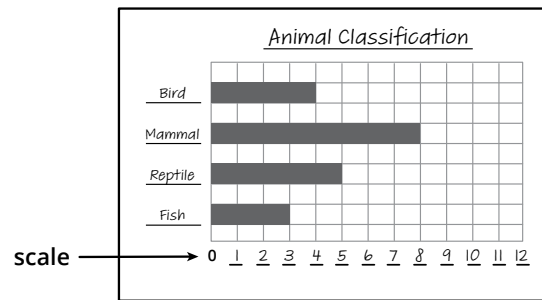
Legend (*Leyenda*): a notation on a graph explaining what symbols represent



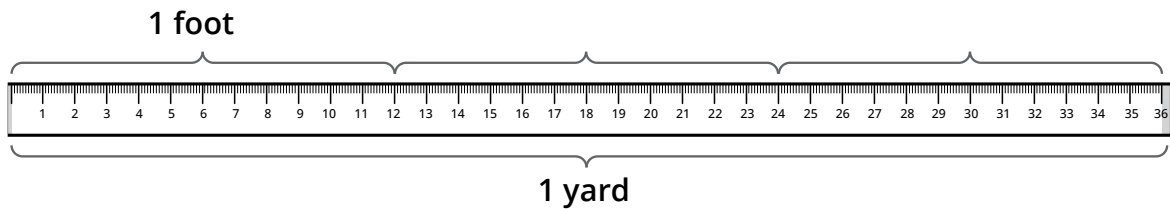
Producer (*Productor*): a person who makes products or provides services



Scale (*Escala*): a number line used to indicate the various amounts represented in a bar graph

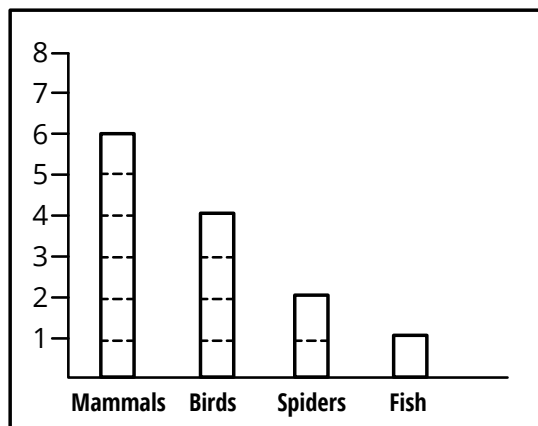


Yard: a unit of length equal to 36 inches or 3 feet

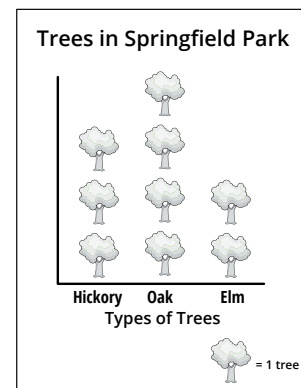


Models

Bar Graph



Pictograph



Table

Oranges	Lemons	Bananas	Pears
2	5	3	4



Grado 2 Módulo 7

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **2.2E, 2.2F, 2.4A, 2.4B, 2.4C, 2.5A, 2.5B, 2.9A, 2.9B, 2.9C, 2.9D, 2.9E, 2.10A, 2.10B, 2.10C, 2.10D, 2.11A, 2.11B, 2.11C, 2.11D, 2.11E, 2.11F**

En el Módulo 7, los estudiantes usan estrategias de suma y resta hasta el 100 y destrezas de resolución de problemas a medida que aprenden a trabajar con varios tipos de unidades dentro de los contextos de longitud, dinero y datos. En este módulo también se incluye una exploración de la comprensión de finanzas personales. Se espera que su estudiante:

- ☐ Aprenda a clasificar imágenes e información en categorías y a registrar esos **datos** en una **tabla**.
- ☐ Cree y use **pictografías y gráficas de barras** para organizar y representar un conjunto de datos con hasta 4 categorías por gráfica.
- ☐ Cuente el valor total de un grupo de monedas, contando saltando números de cinco en cinco y de diez en diez según sea necesario.
- ☐ Aprenda a hacer cambios de un dólar usando estrategias para contar a partir de un número y para simplificar (p. ej., la manera de flechas).
- ☐ Resuelva problemas escritos de uno y dos pasos que involucren el dinero y la longitud.
- ☐ Considere el ahorro como una alternativa al gasto y aprenda cómo el dinero ahorrado puede convertirse en una suma mayor con el tiempo.
- ☐ Compare **depósitos y retiros, consumidores y productores, y pedir un préstamo y prestamistas**.
- ☐ Aprenda sobre la **pulgada** como una unidad de longitud y entienda que 12 pulgadas forman una unidad más grande llamada **pie**.
- ☐ Mida usando ambas unidades de longitud usuales (p. ej., pulgadas, pies, yardas) y métricas (p. ej., centímetros, metros), escogiendo las herramientas adecuadas para medir cada objeto de manera eficiente.
- ☐ Genere puntos de referencia mentales para las unidades del sistema inglés (usual); por ejemplo, el ancho de una moneda de 25 centavos es aproximadamente 1 pulgada, y la longitud de una hoja de papel es aproximadamente 1 pie.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

- Invite a su estudiante a crear una pictografía para diferentes tipos de monedas. Dele un puñado de monedas de 1 centavo, de 5 centavos, de 10 centavos y de 25 centavos, y pídale que clasifique y organice las monedas por tipo. Anímelo a dibujar una pictografía en papel para representar cuántas monedas de cada tipo hay en los grupos.



- Ayude a su estudiante a practicar cómo hacer un dólar o cambiar un dólar haciéndole preguntas como: "Si tengo 35 centavos, ¿cuántos más necesito para tener 100¢ o un dólar?". Entregue a su estudiante monedas para mostrar cómo cuenta a partir de un número hasta un dólar y desafíelo a registrar su trabajo usando la manera de flechas.
- Practique con un juego de estimación con su estudiante. Desafíelo a estimar la longitud de objetos domésticos y luego pídale que mida cada objeto para ver qué tan cerca está su estimación de la medida real.
- Juegue "Rueda y sigue la regla" con su estudiante, para ayudarlo a mantener o desarrollar fluidez con la suma y la resta. Dele un número base como 9 y luego pídale que lance un dado para encontrar la regla. (Si no hay un dado disponible, el juego se puede jugar usando un generador de números aleatorios en un teléfono inteligente). Por ejemplo, si lanza un 5, entonces él suma 5 repetidamente: $9 + 5 = 14$, $14 + 5 = 19$, $19 + 5 = 24$. Pida a su estudiante que registre tantas oraciones numéricas como pueda durante 30 segundos y luego cambie a un número base diferente y lance el dado para obtener una nueva regla. Juegue nuevamente con la resta, comenzando con un número base como 40. Por ejemplo, si su estudiante saca un 2, entonces él resta 2 repetidamente: $40 - 2 = 38$, $38 - 2 = 36$, $36 - 2 = 34$.

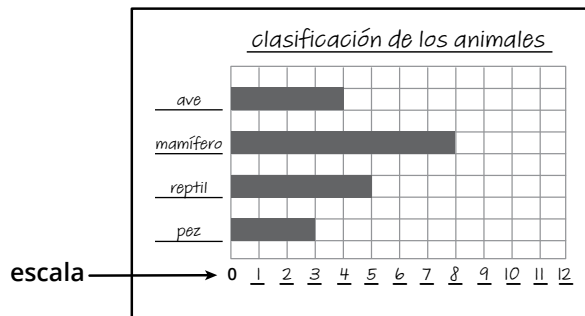
Términos

Consumidor (*Consumer*): persona que compra un producto o un servicio

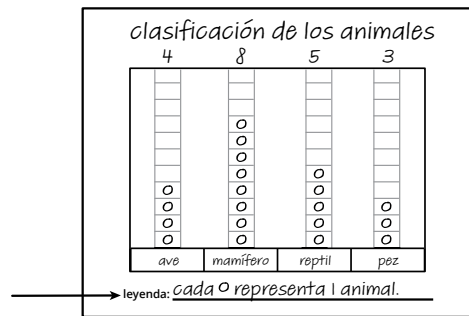
Datos (*Data*): un conjunto de hechos o piezas de información

hábitats animales		
ártico	bosque	océano
4	10	6

Escala (*Scale*): una recta numérica usada para indicar las diferentes cantidades representadas en una gráfica de barras

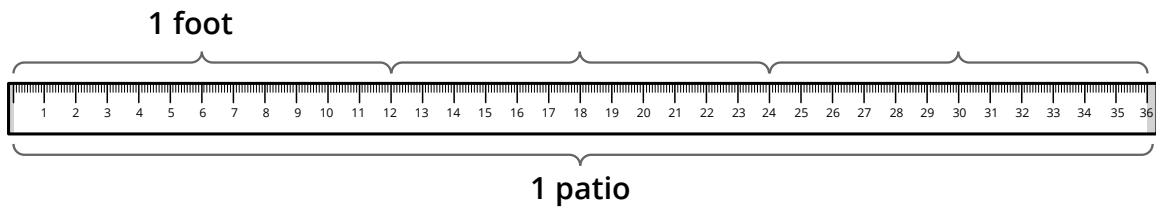


Leyenda (Legend): una anotación en una gráfica que explica lo que representan los símbolos



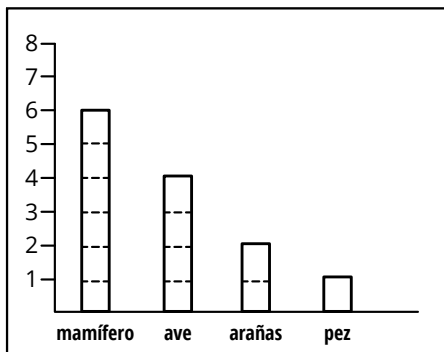
Productor (*Producer*): persona que elabora productos o presta servicios

Yarda: una unidad de longitud igual a 36 pulgadas o 3 pies

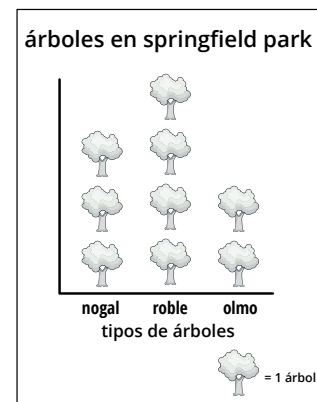


Modelos

Gráfica de barras



Pictografía



Tabla

naranjas	limones	bananas	peras
2	5	3	4



Grade 2 Module 8

Tips for Families

Key Concepts Overview

Focus TEKS: **2.3A, 2.3B, 2.3C, 2.3D, 2.8A, 2.8B, 2.8C, 2.8D, 2.8E, 2.9G**

In Module 8, students explore two- and three-dimensional geometric shapes, identifying their attributes to sort, classify, and compare. They will study how shapes can be put together to form new shapes and how they can be partitioned, or divided, into equal fractional parts. Students will use their understanding of fraction concepts to tell time. Your student will:

- ☐ Use attributes such as the number of sides or **angles** to describe various shapes.
- ☐ Use attributes to build different **polygons** including triangles, **quadrilaterals**, **pentagons**, and hexagons.
- ☐ Use attributes to identify and draw different quadrilaterals including rectangles, rhombuses, **parallelograms**, and trapezoids.
- ☐ Use a tangram puzzle to explore how smaller shapes can be put together to form different shapes and to recognize that smaller parts make up a **whole**.
- ☐ **Partition** shapes into equal parts and describe those parts as halves, fourths, or **eighths**.
- ☐ Partition a circle into halves and quarters to make a paper clock and tell time to the half hour and **quarter** hour.
- ☐ Tell time to the nearest five minutes and relate **a.m.** and **p.m.** to time of day.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

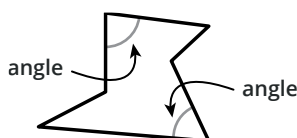
- Go on a shape hunt around town. Challenge your student to spot as many two- and three-dimensional shapes as she can and to prove she is correct by naming the attributes that define the shape. For example, she might spot a street sign and say, "I see a rectangle! It has 4 sides and 4 right angles!"
- Consider going to the library or bookstore to get *Grandfather Tang's Story*, by Ann Tompert. Read the book with your student and invite him to use his tangram pieces to make the shapes shown in the book.
- Help your student make real-world connections to math by asking questions such as, "Can you think of any objects that are made up of several smaller shapes?" (e.g., tile floors, brick walls, the sections of an orange), "When would you want to have equal shares of something?" (e.g., sharing food, such as a pizza), and "Where do you see examples of halves, fourths, or eighths?" (e.g., a blanket or towel folded in half, a newspaper folded into quarters, 1 cube in a stick of 4 linking cubes).



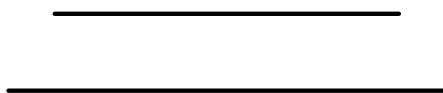
- Help your student make connections between fractions and telling time. You might ask questions such as, “Why is 15 minutes called a quarter hour?”, “How do you know that 3:45 and a quarter to 4 represent the same time?”, and “Why is it called the half hour when the minute hand points to the 6?”
- Encourage your student to be on the lookout for clocks in stores, in restaurants, or around town. Ask her to tell the time to the nearest one minute, to the nearest five minutes, to the quarter hour, or to the half hour.

Terms

Angle (*Angulo*): a shape formed by the corner of a polygon



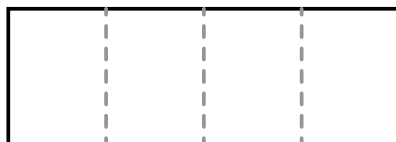
Parallel (*Paralelo*): lines or sides that go in the same direction and never touch or cross



Parallelogram (*Paralelogramo*): a polygon with 4 sides and 4 angles; opposite sides are parallel



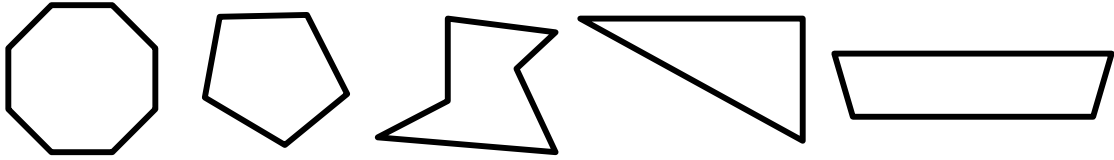
Partition (*Partición*): to divide, or split, something into parts or shares



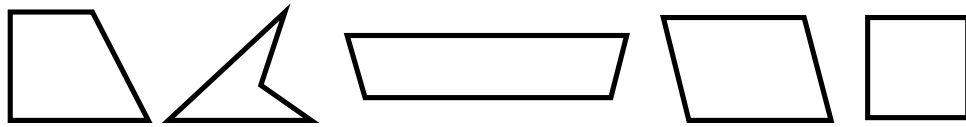
Pentagon (*Pentágono*): a polygon with 5 sides and 5 angles



Polygon (*Polígono*): a closed shape that has 3 or more straight sides



Quadrilateral (*Cuadrilátero*): a polygon with 4 sides and 4 angles



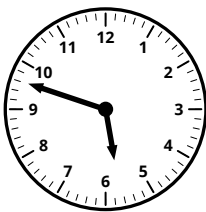
Whole: a complete shape that does not leave out any part



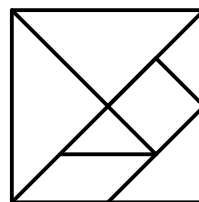
4 fourths, or 1 whole

Models

Analog Clock



Tangram



Grado 2 Módulo 8

Consejos para las familias

Contenido general de los conceptos clave

TEKS de enfoque: **2.3A, 2.3B, 2.3C, 2.3D, 2.8A, 2.8B, 2.8C, 2.8D, 2.8E, 2.9G**

En el Módulo 8, los estudiantes exploran las figuras geométricas de dos dimensiones y de tres dimensiones, identificando sus atributos para ordenar, clasificar y comparar. Estudian cómo pueden juntarse las figuras para formar figuras nuevas y cómo pueden separarse o dividirse, en partes fraccionarias iguales. Los estudiantes usan su comprensión de los conceptos de fracciones para leer la hora. Se espera que su estudiante:

- ☐ Use atributos como el número de lados o **ángulos** para describir varias formas.
- ☐ Use atributos para construir **polígonos**, incluyendo triángulos, **cuadriláteros**, **pentágonos** y hexágonos.
- ☐ Use atributos para identificar y dibujar diferentes cuadriláteros, incluyendo rectángulos, rombos, **paralelogramos** y trapecios.
- ☐ Use un rompecabezas de tangram para explorar cómo se pueden juntar figuras más pequeñas para formar diferentes figuras y para reconocer que las partes más pequeñas forman un **entero**.
- ☐ **Divida** las figuras en partes iguales y describa esas partes como mitades, cuartos u **octavos**.
- ☐ Divida un círculo en mitades y cuartos para hacer un reloj de papel y lea la hora a la media hora y al **cuarto** de hora.
- ☐ Lea la hora a los cinco minutos más cercanos y relacione **a. m.** y **p. m.** con la hora del día.

Puede usar la lista de verificación anterior para ayudar a monitorear el progreso de su estudiante con los conocimientos y destrezas de este módulo. Ejemplos diarios de problemas con soluciones y burbujas de pensamiento se encuentran en las páginas del libro de Ayuda para la tarea de Triunfar, versión del estudiante, para ayudarlo a apoyar a su estudiante mientras trabaja en casa.

Formas adicionales de ayudar en casa

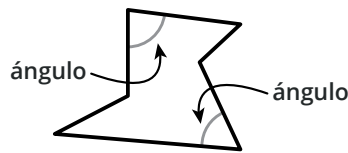
- Vayan juntos en búsqueda de figuras por la ciudad. Desafíe a su estudiante a encontrar tantas figuras de dos dimensiones y de tres dimensiones como pueda y a demostrar que está en lo correcto nombrando los atributos que definen la figura. Por ejemplo, podría ver un letrero de la calle y decir: "¡Veo un rectángulo! ¡Tiene 4 lados y 4 ángulos rectos!".
- Considere ir a la biblioteca o a la librería para conseguir el libro Historia del abuelo Tang, de Ann Tompert. Lean juntos el libro e invite a su estudiante a usar sus piezas de tangram para hacer las figuras que se muestran en el libro.
- Ayude a su estudiante a hacer conexiones del mundo real con las matemáticas haciendo preguntas como: "¿Puedes pensar en algún objeto que esté formado por varias figuras más pequeñas?" (p. ej., pisos de mosaicos, paredes de ladrillo, las secciones de una naranja), "¿Cuándo te gustaría tener partes iguales de algo?" (p. ej., compartir comida, como una pizza) y "¿Dónde ves ejemplos de mitades, cuartos u octavos?" (p. ej., una cobija o toalla doblada por la mitad, un periódico doblado en cuartos, 1 cubo en una barra de 4 cubos conectables).



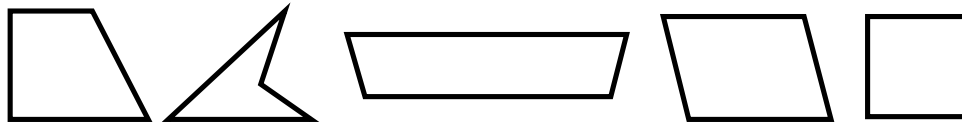
- Ayude a su estudiante a hacer conexiones entre las fracciones y leer la hora. Podría hacer preguntas como: "¿Por qué 15 minutos se llaman cuarto de hora?", "¿Cómo sabes que las 3:45 y las 4 menos un cuarto representan la misma hora?" y "¿Por qué se llama media hora cuando la manecilla de los minutos apunta las 6?".
- Anime a su estudiante a poner atención a los relojes en las tiendas, en los restaurantes o en la ciudad. Pídale que lea la hora al minuto más cercano, a los cinco minutos más cercanos, al cuarto de hora o a la media hora.

Términos

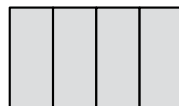
Ángulo (*Angle*): figura formada por la esquina de un polígono



Cuadrilátero (*Quadrilateral*): un polígono con 4 lados y 4 ángulos



Entero: una figura completa a la que no le falta ninguna parte



4 cuartos o 1 entero

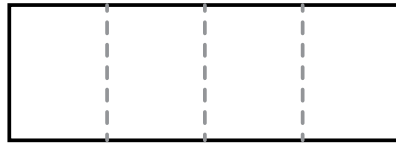
Paralelas (*Parallel*): líneas o lados que van en la misma dirección y nunca se tocan ni se cruzan



Paralelogramo (*Parallelogram*): un polígono con 4 lados y 4 ángulos; los lados opuestos son paralelos



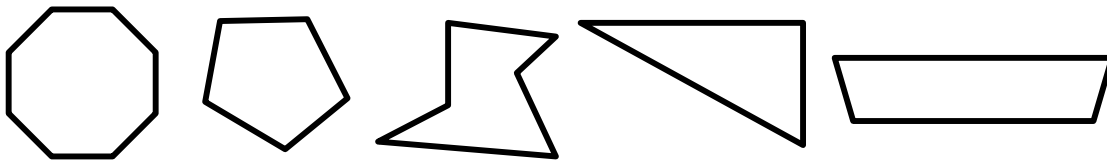
Partición (*Partition*): dividir o separar, algo en partes o piezas



Pentágono (*Pentagon*): un polígono con 5 lados y 5 ángulos.

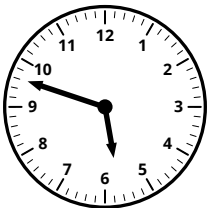


Polígono (*Polygon*): figura cerrada que tiene 3 o más lados rectos

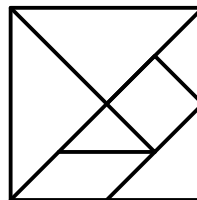


Modelos

Reloj analógico



Tangram



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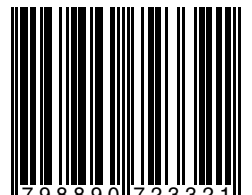
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