



Teacher Edition: Planning and Pacing Guide

Grade K

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Printed in the U.S.A.

ISBN 978-0-358-11193-1

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Advocates for Excellence

To develop *Into Math*, we listened to teachers like you, who told us about their unique classroom challenges. Thanks to their voices, *Into Math* is more than just aligned to standards; it was built specifically to help you and your students succeed in the classroom and on high-stakes assessments.

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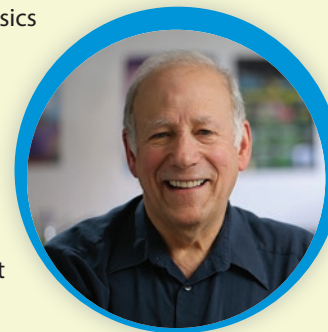
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Welcome to



Perseverance Powers Student Growth

Designed from the ground up to meet the high expectations of Mathematics Standards, *Into Math* is the only solution built to track, predict, and propel growth for all your students in kindergarten through grade 12.

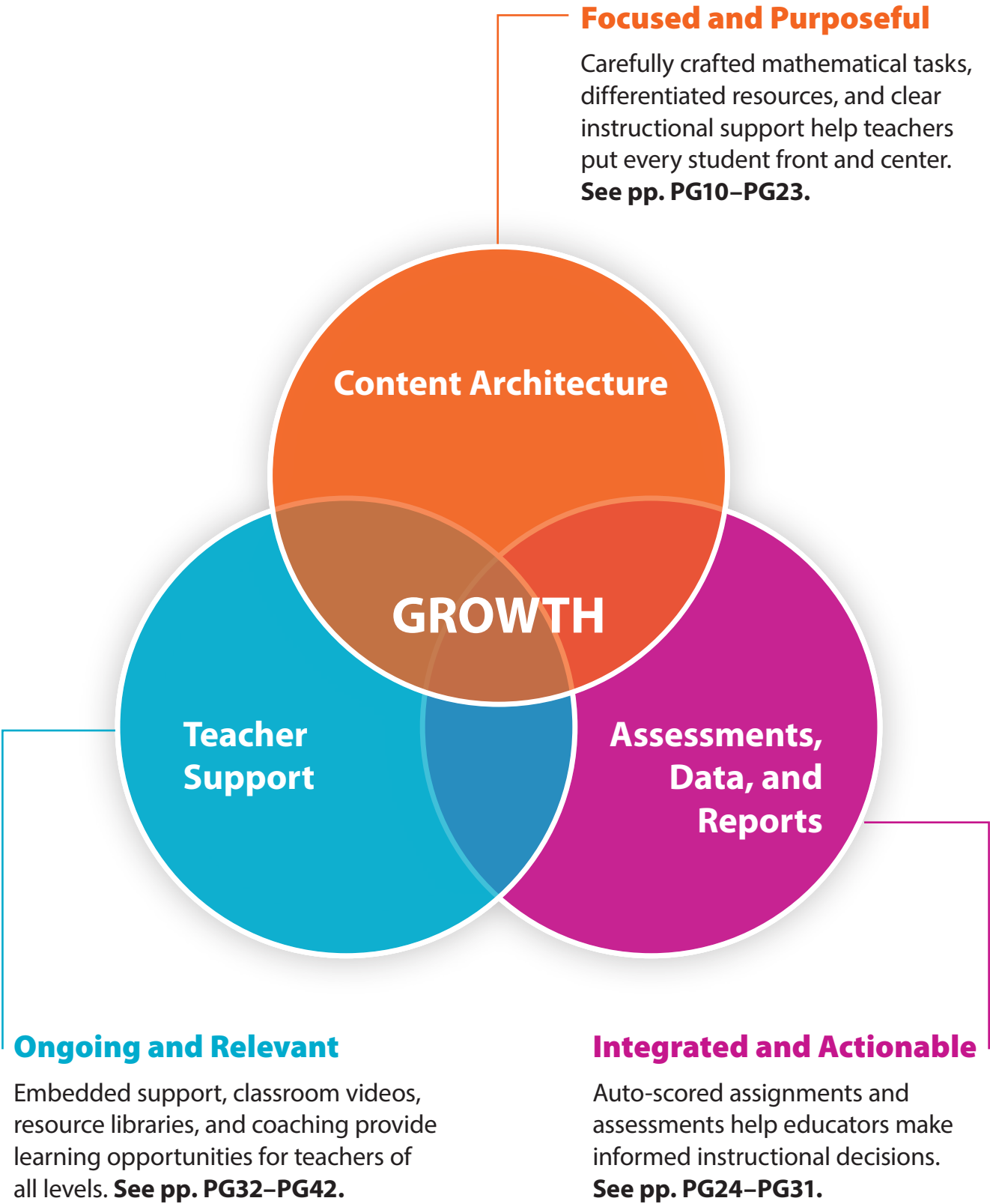
The Outcomes You Want

The *Into Math* system produces measurable outcomes:

- **students** who have mastered rigorous standards, equipped with skills to persevere when presented with challenging, real-world problems
- **teachers** who grow as professionals, able to apply current research-based strategies and best practices
- **educators** who leverage data to differentiate and adapt, ensuring success in high-stakes assessments
- **families** that use accessible tools to support learning at home

What Makes *Into Math* Students *Unstoppable*?

The *Into Math* system maximizes student growth by helping teachers deliver high-quality instruction while monitoring every student’s success.



Content Architecture

Focus, Coherence, and Rigor

In *Into Math*, the progression of topics forms coherent learning arcs. The learning arcs are designed to build a foundation of conceptual understanding before teaching procedures. Opportunities for application occur throughout. An emphasis is placed on connections between concepts and skills. The learning arcs ensure delivery of rigorous instruction.

Learning Arc



To help you visualize the arc and teach with purpose, *Into Math* has three types of lessons, each with a different focus and containing certain learning task types:

Build Understanding

Conceptual These lessons focus on opportunities for students to make sense of the mathematics and build conceptual understanding with real-world context.

- Spark Your Learning
- Build Understanding

Connect Concepts and Skills

Bridging These lessons focus on having students connect different conceptual representations, approaches, or strategies to more efficient procedures.

- Spark Your Learning
- Build Understanding
- Step It Out

Apply and Practice

Procedural These lessons focus on opportunities for students to develop procedural fluency and to apply concepts and procedures.

- Step It Out

Learning Tasks

Spark Your Learning tasks promote conceptual understanding. During these low floor/high ceiling tasks, students leverage prior learning and select manipulatives or representations that serve as their entry point. Teachers provide just-in-time support, helping students engage in meaningful discourse and learn to persevere. Teachers lead the class to shared understanding in a student-centered environment.

Build Understanding tasks are learning opportunities designed to help students understand lesson concepts. Teachers take a more active role, guiding discussion during whole-class instruction.

Step It Out tasks build upon students' conceptual understanding to promote procedural understanding and fluency. Teachers help students understand why the procedures are efficient and how they can be applied to solve similar problem types.

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Creating a Learning Arc

Teaching with Coherence

For students to make the most of their mathematics education, topics should be taught with coherence. This means that topics should be taught as connected ideas rather than within individual silos. Consider strategies for addition. Linking counting strategies with grouping strategies like making a ten in grade 1 supports students to develop fluency with basic facts, setting the stage to make sense of adding and subtracting with regrouping in grade 2.

A benefit of making connections within different mathematical topics is that students have multiple pathways to retrieve what they learned and therefore rely less on rote memorization. For example, students can use counting strategies like *counting on from the larger number*, to recognize that when counting on from a number close to ten, it might be easier to make a group of ten to add (see Figure 1).

Connecting Concepts and Procedures

Rigor describes the important balance between concepts and procedures. While balance is important, so is the order with which concepts and procedures are addressed. Concepts must be taught before procedures; otherwise, there is no motivation to make sense of the mathematics prior to using more efficient processes.

Consider subtracting multi-digit numbers without a deep understanding of place value. If students are taught the procedure to:

- line up the numbers,
- subtract the ones,
- subtract the tens, and
- subtract the hundreds

prior to understanding place value, then students may make the error of subtracting the digit with the lesser value from the digit with the greater value regardless of which “number” is “on top”. This confusion often comes from students not understanding that when ones are subtracted from ones, then tens from tens, and then hundreds from hundreds, the values of multi-digit numbers do not change, the numbers are just grouped by place value. Students are less likely to make these errors with procedures when they have an understanding of place value and representing numbers flexibly. The learning arc is complete when concepts are taught first and then those concepts are linked to more efficient processes before the procedures are practiced and applied.

Figure 1 from Grade 1, Lesson 1.4

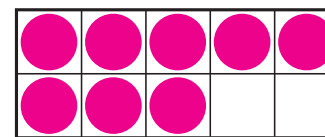
Step It Out



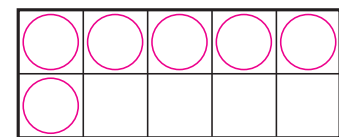
I Erik reads 6 books.
Kim reads 8 books.
How many books do they read?



A THINK: 8 is close to 10. So, start with 8.
Use ● to show $8 + 6$.

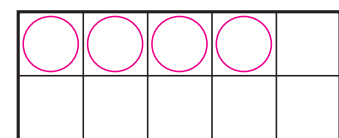
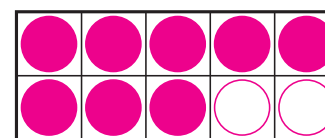


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B Move some ● to make a ten.



Content Architecture

Lesson Design

Into Math classrooms are different. Lessons are designed to help you incorporate research-based best practices into your instruction. This design is found in the print student books and in the interactive digital lessons, enabling you to utilize either pathway or a blended approach.



SPARK YOUR LEARNING

5-10 minutes

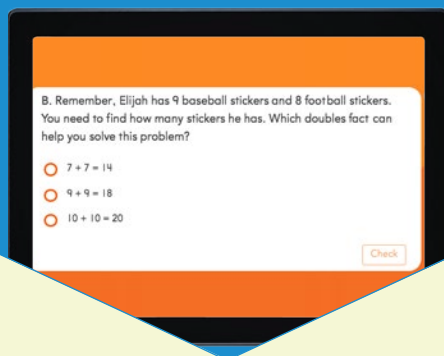
Teachers guide student discussions, help students persevere as they work together on a mathematical task, and build shared understanding by selecting students to explain their reasoning.



LEARN TOGETHER

5-10 minutes per task

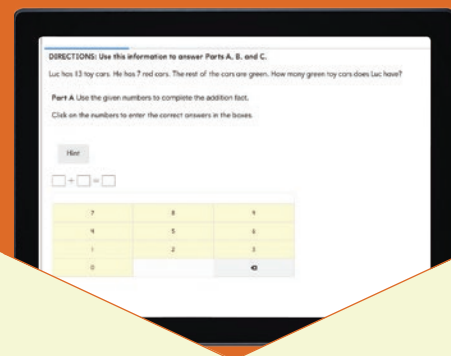
Teachers facilitate learning during whole-group instruction, which ensures that students continue to play an active role in sharing their reasoning and understanding. In *Step It Out* features, students connect important processes and procedures to mathematical concepts.



CHECK UNDERSTANDING

5 minutes

Teachers utilize this quick formative assessment to determine whether students have mastered lesson content and to identify which differentiation resources will be most useful for each student.





The pacing recommendations within each lesson can be modified based on individual preferences and teaching styles. Yearlong pacing recommendations are in the Pacing Guide starting on page PG46.



DIFFERENTIATION OPTIONS

Fill remaining time

A variety of leveled resources are available to help teachers differentiate early and effectively.



WRAP-UP AND HOMEWORK

5 minutes

Teachers bring the class together to summarize, using Exit Tickets, journal writing, "I Can" self-assessment, or anchor charts.

Small Groups

Teachers use the Tabletop Flipchart activity to guide small groups of students.

Independent Practice

Students can continue to the *On Your Own* portion of the lesson.

Math Centers

Print and digital games, readers, and activities can be used to set up centers.

Waggle


Waggle complements *Into Math* with personalized learning that supports students at all proficiency levels.


Promoting Conceptual Understanding

Not All Tasks Are Equal. The *Spark Your Learning* tasks have been carefully crafted to promote reasoning and problem solving. The tasks can be solved using various solution strategies and have a low floor and a high ceiling to ensure every student can make progress and build understanding.

Connect Concepts and Skills
LESSON 3

NAME _____

Add or Subtract Tens
(I Can) add and subtract multiples of ten.
Spark Your Learning
Use tools to add and subtract.
Record your answers on the hundred chart.

A squirrel has 50 acorns.
Then she has 80 acorns.
Now she has 20 acorns.

Check children's work.
Possible shading shown.

Read the following: A squirrel has 50 acorns. She gathers 30 more acorns. Then she buries 60 acorns. How many acorns does the squirrel have now? Allow children to choose tools to solve the problem, including 10-cube trains.
Module 12 • Lesson 3
three hundred fifty-seven 357

LESSON 3

Connect Concepts and Skills

1 Spark Your Learning
MOTIVATE
Provide partners with various tools, including 10-cube trains. Read the word problem aloud. Children can also use addition and subtraction equations to solve.
SUPPORT SENSE-MAKING Three Reads
Read the problem three times for children. Ask children a different question shown in the Three Reads box below for a different focus each time.
PERSEVERE
If children need support, guide them by asking:

- Assessing** How do you record the starting number on the hundred chart? *Elicit from children they should highlight 50.*
- Assessing** Describe the problem in your own words. *Children should understand they first add 30, and then they take away 60.*
- Advancing** How can you show the problem another way? *Children could use equations or another tool.*
- Advancing - Use Tools** What other tool could you use to solve the problem? Compare using that tool with the one used in the problem. *Children's choices of strategies or tools will vary.*

Turn and Talk While children talk, have them share strategies to make illustrations to show problems. How could you draw a picture to show the same situation? *Possible answer: I could draw tens to show how many I have to start with and then draw some more, and then cross some out.*
BUILD SHARED UNDERSTANDING
Select children who used various strategies and tools to share with the class how they solved the problem. Have children discuss why they chose a specific strategy or tool.

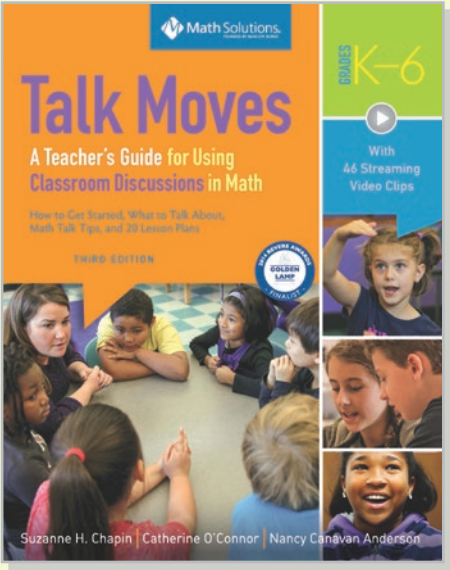
Teachers begin a **Spark Your Learning** task by setting goals and using language-development routines to help students understand the task, if needed.

Teachers support **productive perseverance** and foster a growth mindset as students work through the task. The Teacher Edition includes **student work samples** and provides support to help teachers correct common errors and assess and advance student understanding.

The **Talk Moves** routines encourage student discourse and also help teachers elicit reasoning and guide students.

A *Spark Your Learning* task is complete when the class comes to shared understanding and the teacher celebrates **student success**.

See It in Action
Professional Learning support includes classroom videos with hints, tips, and commentary from experts and authors.



Promoting Perseverance

Rigorous Tasks

There is little argument that students need to learn to persevere. Where the struggle exists is in determining the pathway to this important outcome. It begins with a good task. Good tasks are rigorous. Providing rigorous tasks sets the stage for students to engage in worthwhile activity around learning mathematics. Good tasks have “low floors” and “high ceilings” so that students have access to the content regardless of their prior achievement.

A rigorous task is one that supports students to do the sense-making. A goal might be to make connections between concepts and procedures, or possibly to determine a solution process when a procedure for the solution has not yet been introduced. Students are expected to explain and justify their thinking. Rigorous tasks afford students the opportunities to develop productive habits of mind around mathematical problem solving.

Just-in-Time Scaffolding

All too often, with best intentions, teachers or resources undermine the value of a good task by providing scaffolding too early. It is tempting to provide scaffolding to students at the first sign of struggle or even in anticipation of student struggle. However, if the struggle is productive, this scaffolding should be withheld. Instead of providing scaffolding just in case students might need it, scaffolding should be offered just in time, when there is evidence that a student’s struggle is no longer productive.

While the opportunity to develop perseverance is reliant on access to good tasks, it is supported during instruction by effective teaching. For students to develop perseverance, they must engage in productive struggle. This means that scaffolding, on the student page or from the teacher, needs to be managed in a way that supports students to do the sense-making.

Scaffolding should be provided when students’ engagement with the task is no longer productive or when the students’ work is not leading to the learning objective. A key to effective teaching is to know when to provide the scaffolding and when to step aside to allow students to persevere.

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Content Architecture

Real-World Relevance

Is your weight on the Moon proportional to your weight on Earth?
Am I on track to meet my goal for number of steps walked today?
How did people 10,000 years ago incorporate geometric designs into their jewelry? Projects and tasks in *Into Math* are carefully crafted, not only to ensure they have the appropriate level of rigor, but also to ensure students remain engaged and see the relevance of math in the world around them.

Each unit opens with a career-related project that students can work on throughout the unit.

UNIT
4

ADDITION AND SUBTRACTION IN BASE TEN

Module 12: Understand Addition and Subtraction with Tens and Ones

Module 13: Two-Digit Addition and Subtraction

Veterinarian **STEM**

- Ask children to think about times when they visited a doctor. Explain that pets and other animals visit special doctors called veterinarians.
- Explain that veterinarians work with many different types of animals.
- Say:** If you have a pet, you may have taken it to a veterinarian before. If you did, you probably saw other pets there too. Some veterinarians also work with animals that people do not keep as pets. Sometimes they treat animals in aquariums, zoos, or even the wild.
- Explain that veterinarians have to understand how animals' bodies work. They also must understand illnesses that affect the specific types of animals that they work with.

STEM Task:

The first step to child-led inquiry is to have the children ask questions about primary resources. Ask children to generate questions about the picture. If children need help, start by brainstorming a few questions aloud, such as "What is the girl listening to?" and "Which person is the veterinarian?"

Tell children to ask questions only, not to answer them. Then gather the class together, share questions from each group, and select a main focus question to research together.

Unit 4 Project Card Fruit Pops for Puppies
Use after Lesson 12.8

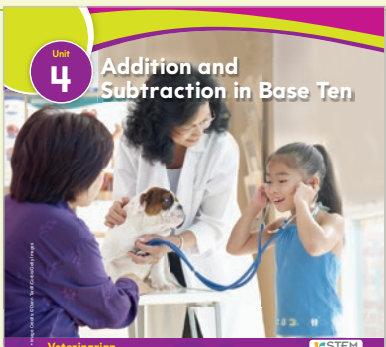
Overview: Children take turns representing teen numbers as 10 plus additional ones.

Materials: craft sticks, rubber bands, "Favorite Fruit Pop Flavors" and "Fruit Pop Party Info Sheet" (Teacher Resource Masters, pp. 8–9)

Assessing Child Performance: Children will represent numbers 11 to 14 as a ten and some ones.

Unit
4

Addition and Subtraction in Base Ten



Veterinarian **STEM**

Do you have a pet? How do you keep your pet healthy? Where might you take your pet if it was ill?


Veterinarians provide regular checkups to ensure that pets stay healthy. They also take care of pets when they are sick.

STEM Task:

Work with a partner. Look at the picture. Ask as many questions as you can.

Unit 4 three hundred forty-five 345

Fruit Pops for Puppies **STEM**



An animal shelter wants to have a fruit pop party for puppies. In this activity, you are a veterinarian helping to make fruit pops that are safe for puppies to eat.


You have a chart showing how many fruit pops you should make of each flavor. Add to find out how many fruit pops to make in all.

You can use the Fruit Pop Party Info Sheet to help you.

- Write addition sentences to find how many fruit pops you need.
- Use craft sticks to model the addition sentences.
- How can grouping ten objects help you add? Use your model to solve.

Unit 4 346

Learning Mindset Bounce Back Notices Others



There may be times when our friends need our help. We may notice that they look sad, frustrated, or confused. When we notice the reactions of others, we can help them to solve a problem or complete a task.

Reflect

- Look at the picture. What do you notice about the children in the picture? Describe any clues you see.
- Think of a time when you helped someone else. How did you know they needed help?

346 three hundred forty-six

Social-Emotional Learning
Learning Mindset
Bounce Back: Notices Others

The learning mindset focus for this unit is *bounce back*. When children have difficulty understanding a concept, demonstrating a skill, or solving a problem, they may feel frustrated. Help children learn coping skills that they can use when faced with frustration. Then they will be better equipped to persevere in solving the problem or learning the new concept.

Children may also notice when others are feeling frustrated, angry, or sad. Model ways that children can use their own experiences to help others persevere and bounce back.

Understanding Mindset Beliefs

Ask children to share experiences of when they could not solve a problem and felt frustrated or sad as a result. Share an experience of your own, focusing on the beliefs that made it difficult for you to bounce back and the impact of working with and noticing others. For example, were you ever on a team for a sport that was new to you but familiar to your teammates? At first you might be frustrated that you don't know the game very well, and that could make you angry or sad. But by watching your teammates, noticing the way they play, and playing with them, you eventually learn the game yourself. You don't stay frustrated forever, and sometimes a little bit of frustration is enough to encourage you to work harder toward your goal.

Developing Growth Mindset Behaviors

Once children have identified beliefs that make it difficult to bounce back, ask volunteers to share strategies that they have successfully used to manage their emotions. Then discuss ways that they can tell when a classmate needs some encouragement. Encourage children to help their classmates when necessary by sharing their strategies for bouncing back.

What to Watch for

Watch for children who regularly have difficulty managing their emotions. For these children:

- incorporate a system that meets their specific emotional needs
- watch for behavior from other children that may trigger difficult emotions for that child specifically
- provide visual reminders of strategies that can be used throughout the day to manage emotions

Watch for children who use negative behavior to receive attention. For these children:

- give them the attention they need when they display the desired behaviors
- intervene quickly if children have difficulty managing their emotions
- look for opportunities to provide them with additional attention when they have successfully managed their emotions

"We have always been able to bounce back."

—Tim Salmon

Cross-curricular tasks are found throughout the program, including STEM problems in each module and STEM-themed unit projects.

Opportunities, strategies, and support to help students focus on mindset are embedded in every lesson and in the unit-level projects.

PG16

Planning and Pacing Guide

Mathematical Practices and Processes

Into Math provides a focus on Mathematical Practices and Processes aligned to the lesson's learning goal and the tasks that meet the learning goal.

12.1 Represent Adding Tens

LESSON FOCUS AND COHERENCE

Mathematics Standards

- Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Model with mathematics.
- Look for and make use of structure.

I Can Objective

I can add multiples of ten with multiples of ten.

Learning Objective

Add tens to decade numbers.

Language Objective

- Explain how to add tens to tens.
- Explain how to use equations to show problems.

Vocabulary

Review Vocabulary: equations, ones, tens

Lesson Materials: base-ten blocks, number cube, connecting cubes

Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children: <ul style="list-style-type: none"> composed and decomposed numbers 11 to 19 into tens and ones. (GrK, 17.1-17.4) used drawings and equations to show how to compose and decompose numbers. (GrK, 17.1-17.4) 	Children: <ul style="list-style-type: none"> add two-digit numbers with a multiple of ten, within 100. use concrete models, drawings, and strategies to solve and reason problems. understand how to add two-digit numbers with multiples of ten. 	Children: <ul style="list-style-type: none"> will use addition and subtraction within 100 to solve various problem types. (Gr2, 15.1-15.3) will solve addition and subtraction problems using drawings and equations with a symbol for the unknown number. (Gr2, 14.1-14.4)

UNPACKING MATH STANDARDS

Add within 100, including adding a two-digit number and a one-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

What It Means to You

In this lesson, only a portion of the standard is taught. Children learn to add two-digit numbers with tens, by adding tens with tens. Children practice the concept by solving word problems using concrete models and visual models, and then write matching equations.

Before children can attain proficiency with addition and subtraction, they require plenty of experiences modeling and solving various problem types with the unknown quantity in various positions in the equation.

Each lesson focuses on Mathematical Practices and Processes based on the lesson's learning goal.

2 Learn Together

Build Understanding

Task 1 Use Structure Encourage children to use place value to show tens visually and solve a simpler equivalent equation. $3 + 4 = 7$, $3 \text{ tens} + 4 \text{ tens} = 7 \text{ tens}$, and $30 + 40 = 70$

CONNECT TO VOCABULARY

Have children use the **Interactive Glossary** during this conversation to record their understanding.

CONNECT MATH IDEAS, REASONING, AND LANGUAGE Compare and Connect

Before beginning the task, have children define the word *equation* in their own words.

Sample Guided Discussion:

What do you need to do to solve the problem?

Possible answer: I add the two numbers.

Turn and Talk While children talk, listen to verify they use appropriate language to explain their reasoning. Possible answer: $3 + 4 = 7$ and 7 tens is equal to 70, so $30 + 40 = 70$.

Build Understanding

The Beach Shop has 30 adult sunglasses and 40 child sunglasses. How many sunglasses does the shop have?

How can you show the problem?

Check children's work. Possible drawing:

How can you write an equation to solve the problem?

Possible equation: $30 + 40 = 70$

Equation: $30 + 40 = 70$

The shop has 70 sunglasses.

Turn and Talk Does your answer make sense? How do you know? See possible answer at the left.

LEVELLED QUESTIONS

Depth of Knowledge (DOK)	Levelled Questions	What Does This Tell You?
Level 1 Recall	Cindy has 3 board games. Her sister has 5 board games. How many do they have together? 8 board games	Children's answers to this question will demonstrate if they can use addition to solve word problems adding one-digit numbers.
Level 2 Basic Application of Skills & Concepts	How does understanding $3 + 5 = 8$ help you add tens, as in the following problem? $30 + 50 = \dots$ 18 ones is the same as 1 ten, 50, 3 tens + 5 tens equals 8 tens, if tens is equal to 80.	Children's answers to this question will demonstrate they understand how to use what they know about adding ones to add tens.
Level 3 Strategic Thinking & Complex Reasoning	How can you add tens together using mental math to find the number of tens in the sum? I add the numbers shown in the tens place for each addend to get the number of tens in the sum.	Children's answers to this question will demonstrate that they understand how to add tens to tens.

Each task references a focused Mathematical Practice and Process and includes probing questions to support student engagement and depth of understanding.

Make Ten and Ones

Use **Counters** to represent a number from 11 to 19 as a ten and ones with objects and drawings.

Spark Your Learning

How can you draw to show one of these numbers as a ten and ones?

My number: _____

Check that children's drawings match their chosen number and include some kind of representation of a ten.

LESSON 1

1 Spark Your Learning

MOTIVATE

Introduce the problem. Ask: What do you know about the numbers 11-19?

CONNECT MATH IDEAS, REASONING, AND LANGUAGE Compare and Connect

As a class, say the numbers shown on the page. Tell children that numbers 11-19 are known as teen numbers, though some of the numbers do not end with ten. Ask children why they think these numbers are called teen numbers.

PERSEVERE

If children need support, guide them by asking:

- Assessing - Use Tools** Which tools could you use to show the number? Why is the tool you chose the one that works for you? Children may suggest using counters and a ten frame. Children's choices of tools will vary.
- Assessing** How many counters fill a ten frame? 10
- Assessing** What can you do with the remaining counters? Children may suggest lining them up next to the ten frame or partially filling another ten frame.
- Advancing** How do the ten frame and counters show your number as a ten and ones? Possible answer: The filled ten frame shows a ten, and the extra counters are the ones.

Note that some children may choose to use ten frames and others may choose to show their ten and ones another way.

Turn and Talk How does your drawing show "a ten"? Explain. Encourage children to explain how a bundle of 10 ones is the same as 1 ten. Possible answer: I can show 16 by drawing 16 ones. Then I can draw a circle around 10 of the ones to make 1 group of ten.

BUILD SHARED UNDERSTANDING

Select children who used various strategies and tools to share with the class how they solved the problem. Have children discuss why they chose a specific strategy or tool.

Students choose strategies and tools. The Teacher Edition provides additional support with Use Tools questions.

Students solidify their understanding and choose tools strategically. The Teacher Edition provides additional recommendations for student discourse.

Module 9 Review

Vocabulary

Write vocabulary words to complete the sentences.

1. ten is the same as 10 ones.

2. The number 15 has 15 ones.

3. The number 15 has 1 ten.

Concepts and Skills

Luis has 10 books. He gets 7 more books. How many books does Luis have now? Write the number three ways.

$10 + 7 = 17$

1. ten 7 ones Also accept 0 ten 17 ones.

17 books

Ava sees 8 horses by the barn and 5 horses by the fence. How many horses does she see? Draw a quick picture to show the number.

13 horses

Module 9 Review

Use the Module Review as practice and review of the module's content.

Vocabulary

Have children review the terms for this module. Encourage children to think about the meaning of each term in their own words before completing Items 1-3.

Concepts and Skills

Use Tools Prior to assigning the Module Review, help children list the strategies or tools used throughout the module. As each is listed, guide children to think about how they might use each strategy or tool to solve a problem.

As children start the review, read Item 4. Remind children of the list of tools used in the module. Ask them to think of a strategy or a tool that could be used to solve the problem.

After children have completed the review, discuss Item 4 and ask a child to show his or her solution with the strategy or tool used. Have children who used a different tool share their solutions.

DATA-DRIVEN INSTRUCTION

Before moving on to the Module Test, use the Module Review results to intervene based on the table below.

Items	Lesson	DOK	Content Focus	Intervention
4	9.2	3	Write a teen number three different ways.	Reteach 9.2
5	9.1	2	Represent a teen number with a quick picture.	Reteach 9.1

Content Architecture

Mathematical Practices and Processes	Questions to Ask:
<p>Make sense of problems and persevere in solving them.</p> <ul style="list-style-type: none"> • <i>Spark Your Learning</i> tasks provide low floor/high ceiling, real-world problems accessible to all students. Students make sense of these problems to plan their solution pathways. • <i>Build Understanding</i> tasks present problems with some scaffolding, which supports students while they are making sense of problems. • <i>Turn and Talk</i> questions foster collaboration by asking students to discuss their solution pathways or to discuss how they know their solution makes sense. 	<ul style="list-style-type: none"> • What is the problem asking? • How will you use that information? • What other information do you need? • What is another way to solve that problem? • What can you do if you don't know how to solve a problem? • Have you solved a problem similar to this one? • How do you know your answer makes sense?
<p>Reason abstractly and quantitatively.</p> <ul style="list-style-type: none"> • <i>Spark Your Learning</i> tasks provide real-world problems, accessible to all students. Each task is often supported with the language routine <i>Three Reads</i> to help students to reason abstractly and to look at quantities and units. • <i>Build Understanding</i> and <i>Step It Out</i> tasks present problems that require quantitative reasoning. • <i>Turn and Talk</i> questions ask students to discuss the representation of the problem and the meaning of the quantities and units with the context of the problem and solution. • <i>On Your Own</i> and <i>More Practice/Homework</i> include practice problems labeled <i>Reason</i>. 	<ul style="list-style-type: none"> • What quantities are referenced? • How are the quantities related? • How can you represent this situation? • How are the quantities and the units related? • What are the correct units for the quantities in the problem? • How do you know your answer is reasonable?
<p>Construct viable arguments and critique the reasoning of others.</p> <ul style="list-style-type: none"> • <i>Connect to Vocabulary</i> provides context and definitions for academic vocabulary. • The language routine <i>Critique, Correct, and Clarify</i> has students correct work having a flawed explanation, argument, or solution method. • <i>Build Understanding</i> tasks encourage students to describe or explain their reasoning. • <i>Turn and Talk</i> questions ask students to discuss a flawed explanation, argument, or solution method. • <i>On Your Own</i> and <i>More Practice/Homework</i> include practice problems labeled <i>Construct Arguments</i> and <i>Critique Reasoning</i>. 	<ul style="list-style-type: none"> • Will that method always work? How do you know? • What do you think about what the other student said? • Who agrees or disagrees, and why? • Does anyone have another way of looking at that? • What do you think will happen if...? • When would that not be true? • Does that make sense to you? Why?
<p>Model with mathematics.</p> <ul style="list-style-type: none"> • <i>Spark Your Learning</i> tasks provide students with opportunities to use mathematics they know to represent and solve a problem. • <i>Build Understanding</i> and <i>Step It Out</i> tasks present problems and then have students decide how to model the problems. • <i>Turn and Talk</i> questions ask students to describe or explain their models and why they chose a specific mathematical representation. • <i>On Your Own</i> and <i>More Practice/Homework</i> include practice problems labeled <i>Model with Mathematics</i>. 	<ul style="list-style-type: none"> • Why is that a good model for this problem? • How can you use a simpler problem to help you find the answer? • What conclusions can you make from your model? • Do your results make sense within the context of the problem? • How would you change your model if...?

Mathematical Practices and Processes	Questions to Ask:
<p>Use appropriate tools strategically.</p> <ul style="list-style-type: none"> • <i>Unit Openers</i> include a STEM task that has students use mathematics they know to complete a task and then reflect on strategies and tools they used. • <i>Spark Your Learning</i> tasks prompt students to choose tools as part of their solution pathways. Students are asked to explain their choices. • <i>Build Understanding</i> and <i>Step It Out</i> tasks have students choose tools and describe or explain their choices. • <i>Module Review</i> provides an opportunity for students to review the module content and reflect on the full meaning of this practice with a guided discussion. • <i>Turn and Talk</i> questions ask students to describe or explain why they chose a specific tool. • <i>On Your Own</i> and <i>More Practice/Homework</i> include practice problems labeled <i>Use Tools</i>. 	<ul style="list-style-type: none"> • What could you use to help you solve the problem? • What strategy could you use to make that calculation easier? • How would estimation help you solve that problem? • Why did you decide to use...?
<p>Attend to precision.</p> <ul style="list-style-type: none"> • <i>Build Understanding</i> and <i>Step It Out</i> tasks provide vocabulary once students have explored the concept at point of learning and often are paired with <i>Connect to Vocabulary</i>. • The <i>Interactive Glossary</i> provides opportunities for students to make sense of vocabulary by having students record in their own words or with examples. • <i>Step It Out</i> tasks, <i>On Your Own</i>, and <i>More Practice/Homework</i> provide opportunities for students to focus on performing calculations accurately and efficiently. • <i>Turn and Talk</i> questions provide opportunities for students to communicate precisely to others by using accurate mathematical terms and definitions. • <i>On Your Own</i> and <i>More Practice/Homework</i> include practice problems labeled <i>Attend to Precision</i>. 	<ul style="list-style-type: none"> • How do you know your answer is reasonable? • How can you use mathematics vocabulary in your explanation? • How do you know those answers are equivalent? • What does that mean?
<p>Look for and make use of structure.</p> <ul style="list-style-type: none"> • <i>Spark Your Learning</i> tasks provide opportunities for students to relate to structures they know as a way to make sense of the problem and find a solution pathway. • <i>Build Understanding</i> and <i>Step It Out</i> tasks connect concepts by showing an example and asking students to explain or describe a structure based on what is shown in the example. • <i>Turn and Talk</i> questions ask students to identify, describe, or explain a structure they used to solve a problem. • <i>On Your Own</i> and <i>More Practice/Homework</i> include practice problems labeled <i>Use Structure</i>. 	<ul style="list-style-type: none"> • What rule did you use to make...? • Why can you use that property in this problem? • How is that like...?
<p>Look for and express regularity in repeated reasoning.</p> <ul style="list-style-type: none"> • <i>Spark Your Learning</i> tasks provide opportunities for students to notice repeated calculations and other patterns leading to a general method or shortcut. • <i>Build Understanding</i> and <i>Step It Out</i> tasks connect repeated reasoning to a new general method or shortcut. • <i>Turn and Talk</i> questions ask students to describe or explain their reasoning. • <i>On Your Own</i> and <i>More Practice/Homework</i> include practice problems labeled <i>Use Repeated Reasoning</i>. 	<ul style="list-style-type: none"> • How did you discover that pattern? • What other patterns can you find? • What do you remember about...? • What happens when...? • What if you...instead of...? • What might be a shortcut for...?

Language Development

Language development and the development of mathematical understanding are interdependent. All students must be able to listen, speak, read, write, and converse to meet the rigorous expectations of standards and become proficient problem solvers.

B How can you write an equation to solve the problem?

Equation: _____

C The shop has _____ sunglasses.

Connect to Vocabulary

equations:

$80 - 50 = 30$
 $9 = 6 + 3$
 $90 = 60 + 30$

Before teaching new vocabulary, *Into Math* ensures that students have an opportunity to first build a foundation of conceptual understanding. Vocabulary emerges once students have the conceptual foundation on which to build meaning.



Turn and Talk Does your answer make sense?
How do you know?

Balloon POP! Vocabulary

12345

Directions: Play with a partner. Draw 1 card. Describe the word. Your partner guesses the word. If the guess is correct, put a counter on a happy balloon to show that it was popped. If the guess is not correct, put a counter on a sad balloon to show that it was popped.

Continue until 5 balloons are popped. If you pop more happy balloons than sad balloons, both players win!

Materials: 5 counters, Vocabulary Cards

Using the Vocabulary Cards

Academic Vocabulary

Language development is integral to the instruction of *Into Math*. Academic and mathematical language acquisition enhances learning for all children. As children are exposed to and use academic language, they build deeper connections with the mathematical ideas. Use these vocabulary cards as an engaging way to practice vocabulary with your children.

Preparing the Cards

Print the vocabulary cards, and cut them out. The term and definition are on one side. Then fold the cards over so the term is on one side and the definition is on the other. We recommend printing on card stock or laminating them so they are durable and opaque. Each card has a unit number indicated on it.

Good time to use these cards is at the end of each unit by mixing together all the terms with review terms that you think would be most useful for your children. We also included a page of blank cards for you to print out and customize.

Playing Games

We included a printable board with a game already written on it. There are also plenty of games you can play without even using a board. We included some ideas on the next page. We encourage you to bring your own creativity to create ways to use the cards in the classroom!

minus (-)

minus (-)
if minus 3 is equal to 1
 $9 - 3 = 1$

Vocabulary cards can be used with vocabulary games. The eGlossary includes vocabulary terms and definitions translated into ten different languages.

Interactive Glossary

As you learn about each new term, add notes, drawings, or sentences in the space next to the definition. Doing so will help you remember what each term means.

Possible summaries:
My Vocabulary Summary

A add sumar Add to find how many altogether. $3 + 2 = 5$	addend sumando $1 + 3 = 4$ addend
B bar graph gráfica de barras 	

The Interactive Glossary provides space for students to make graphic organizers or drawings for each new vocabulary term.

“We must explicitly teach the language of mathematics in order to give students—especially English learners—access to mathematics.”

Harold Asturias
Director, Center for Mathematics
Excellence and Equity
Lawrence Hall of Science
University of California
Berkeley, California



Math is a second language for ALL students. *Into Math* is built on four design principles from the Stanford Center for Assessment, Learning, and Equity (SCALE). These four design principles promote the use and development of language as an integral part of instruction.¹

1 Support Sense-Making

Scaffold tasks when needed, being sure to amplify (instead of simplify) language for students.

2 Optimize Output

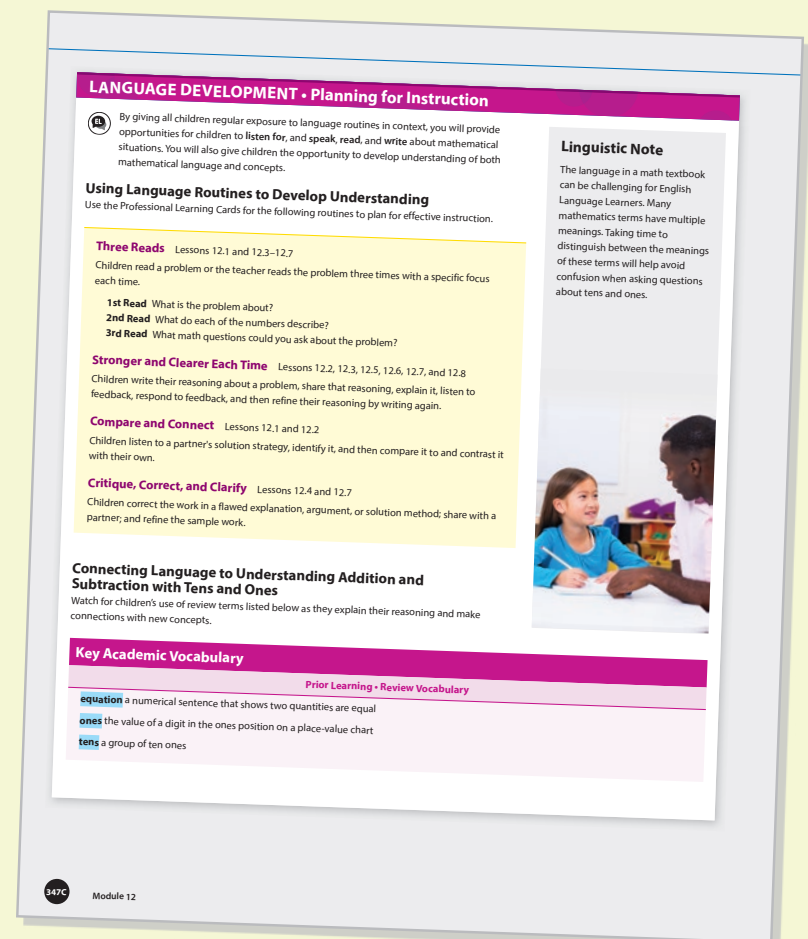
Help students describe their mathematical reasoning and understanding.

3 Cultivate Conversation

Facilitate mathematical conversations among students.

4 Maximize Linguistic and Cognitive Meta-Awareness

Help students evaluate their use of language and see how mathematical ideas, reasoning, and language are connected.



The Language Routines as well as new and review vocabulary words are summarized on the Language Development page at the beginning of each module.

1) J. Zwiers, et al., *Principles for the Design of Mathematics Curricula: Promoting Language and Content Development* (Stanford, CA: Stanford University, 2017).

Content Architecture

Language Development

The **5 Routines for Language Development** help teachers promote the design principles during instruction with routines that are structured, but adaptable, in a format for amplifying, assessing, and developing students'

language. These Routines provide opportunities for students to listen, speak, and write about mathematical situations with practices that are appropriate and effective for all **language proficiency levels**.

1

Three Reads – To ensure understanding of mathematical questions, students read a problem three times with a specific focus each time.



SUPPORT SENSE-MAKING • Three Reads

Read the problem stem three times and prompt the children with a different question each time.

- 1 What is the problem about?
Meg has some toy rings. She has some and then she gets some more.
- 2 What do each of the numbers describe?
20 is the number of toy rings she gets and 50 is the number of toy rings she has at the end.
- 3 What math questions could you ask about the problem?
Possible questions: How many more rings does she get? How many does she have in all? How many did she start with?

2

Stronger and Clearer Each Time – Students use structure to write their reasoning behind a problem, share and explain their reasoning, listen to and respond to feedback, and then write again to refine their reasoning.



CULTIVATE CONVERSATION

Stronger and Clearer

Have children share their work. Remind children to ask questions of each other that focus on how they can write equations to solve this problem. Did they use addition or subtraction to write the equation? Then, have them refine their answers.

3

Compare and Connect – Meta-awareness is strengthened as students listen to a partner's solution strategy and then identify, compare, and contrast this mathematical strategy.



CONNECT MATH IDEAS, REASONING, AND LANGUAGE

Compare and Connect

Point out to children each cube train has 10 cubes. Before beginning the task, have children count forward and back by tens to 100. Have partners share their work and then compare and contrast.

4

Critique, Correct, and Clarify – Students correct sample work having a flawed explanation, argument, or solution method and share with a partner to reflect on and then refine the sample work.



OPTIMIZE OUTPUT

Critique, Correct, and Clarify

Encourage children to question the thinking of their partner. Discuss how to solve the problem. Children should refine their responses.

5

Collect and Display – Students capture oral words and phrases learned and build a collective reference containing illustrations connected to mathematical concepts and terms within each module.

ANCHOR-CHART OPTION

As you progress through the module, build and display an anchor chart.

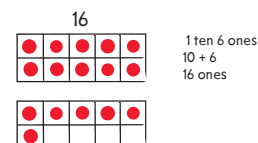


CONNECT MATH IDEAS, REASONING, AND LANGUAGE

Have children build their own anchor chart in their Practice and Homework Journal.

A completed chart for the module is shown here.

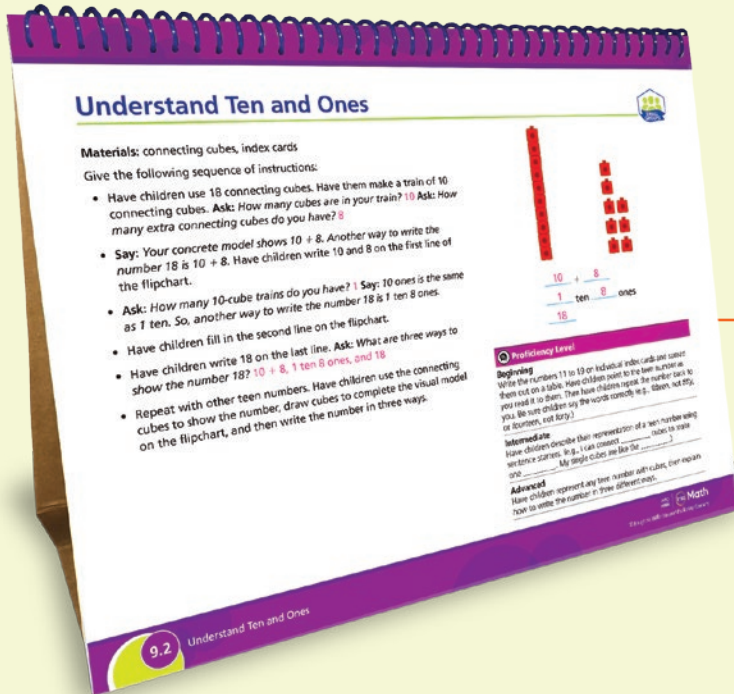
Write Numbers as Tens and Ones



Quick Picture

$$16 = \begin{array}{|c|c|c|c|} \hline \vdots & \vdots & \vdots & \vdots \\ \hline \end{array} \quad 60 = \begin{array}{|c|c|c|c|c|c|} \hline \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ \hline \end{array}$$

Teacher Tabletop Flipcharts, designed for reteaching and reinforcing each lesson's content with small groups, contain leveled scaffolding and support for English learners. These scaffolding suggestions ensure teachers will maintain the rigor and cognitive complexity level required for mathematical reasoning when supporting English learners.



Three proficiency levels

Proficiency Level

Beginning

Write the numbers 11 to 19 on individual index cards and spread them out on a table. Have children point to the teen number as you read it to them. Then have children repeat the number back to you. Be sure children say the words correctly (e.g., *fifteen*, not *fifty*, or *fourteen*, not *forty*.)

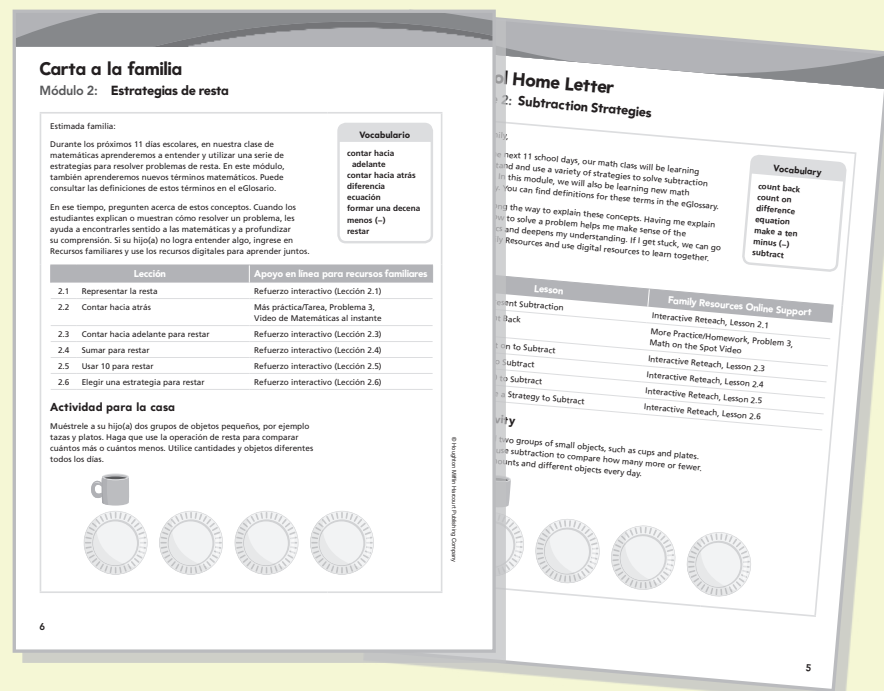
Intermediate

Have children describe their representation of a teen number using sentence starters. (e.g., I can connect _____ cubes to make one _____. My single cubes are like the _____.)

Advanced

Have children represent any teen number with cubes, then explain how to write the number in three different ways.

School Home Letters are available in English, Spanish, Haitian-Creole, and Portuguese.



Assessments, Data, and Reports

Assess and Act to Accelerate Every Student

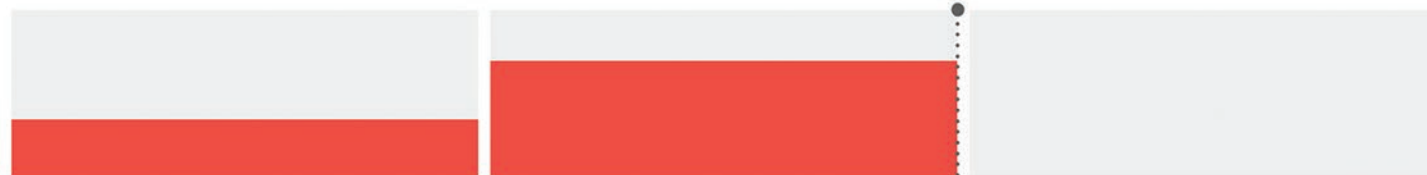
To help students grow, we must first understand where they are and what they need. Assessment tools embedded throughout *Into Math* monitor individual student progress and help teachers understand where students are tracking at any given point. The snapshot below represents what a student's data profile could look like after using *Into Math* for 95 days.

Administered three times per year, this adaptive assessment provides a Quantile® score and is predictive of performance on high-stakes assessment.

These short assessments diagnose prerequisite skills readiness, inform grouping, and measure progress.

Interim Growth Measure

3x year



Module Readiness and Progress

15–20 per year



Lesson Practice and Homework

2x per week, 20 min each



Lesson Practice and Homework with try-again problems, embedded hints, and feedback help students apply what they're learning. Lesson-level formative assessments provide data that help teachers differentiate effectively.

Steven J. Leinwand
Principal Research Analyst
American Institutes for Research
Washington, DC



Assessment Is Only as Good as How We Use the Data

Assessment as Evidence Gathering

We know that effective assessments are far more than just tests we use to help us grade students. Instead, effective assessments are powerful vehicles for gathering evidence of readiness to learn (diagnostic), for learning (formative), and of learning (summative). We also know that the strength and usefulness of the evidence we gather depend on the alignment of these assessments with our standards and our learning goals, as well as on the balance among skills, concepts, and applications and among levels of depth of knowledge found in our assessments.

We plan and we teach. That is, we focus most on our curriculum and our instruction. However, the glue that holds much of our work together and that answers the critical questions about how successful we are being with our planning and teaching is our system of assessments.

Making Effective Use of the Evidence We Collect

Consider the questions to which we all seek reliable answers:

- Are my students ready for the material I'm about to teach?
- Is what I hoped to convey understood by my students? How well?
What appears to need more reinforcement?
- Have my instructional strategies worked, or do they need adjustment?
- Can my students apply what they have learned?
- Have my students made connections with previously learned skills and concepts?
- Do I have to reteach the material?
- Which students need additional attention?
- What specific interventions are needed?
- Has previously taught material been retained?

We use diagnostic, formative, and summative assessments to gather data that help us answer each of these questions, but it is how these data are used that makes all the difference. For example, teachers regularly adjust their lesson plans and teach prerequisite skills and concepts on the basis of diagnostic assessments. Similarly, teachers celebrate success, group students, and reteach content based on formative assessments. Far too infrequently, teachers use summative assessments to identify class and individual problems and gaps, reteach in different ways, and incorporate additional instruction into upcoming units. Finally, teachers use all of these data to revise teaching activities and pacing.

Assessments, Data, and Reports

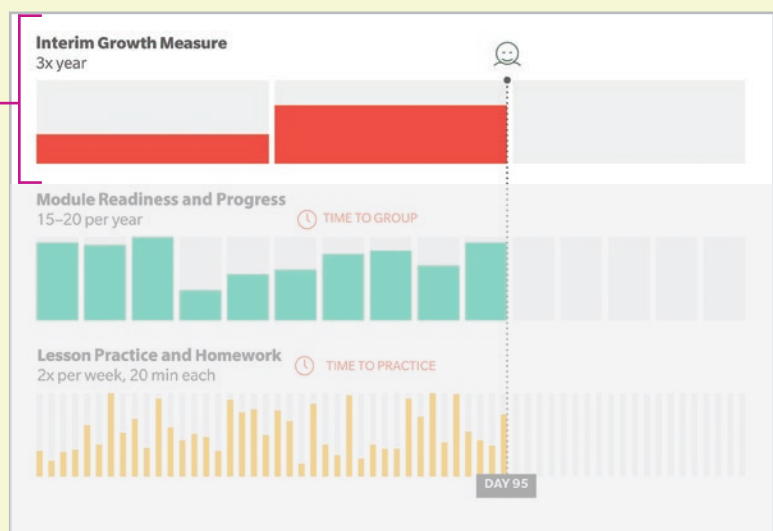
Ed: Your Friend in Learning

Teachers are the key to ensuring student growth. That's why we've designed *Into Math* with teachers' needs front of mind. Ed: Your Friend in Learning is your new friend in teaching, designed specifically to help you regain time and easily plan, create, and implement high-impact instruction all from one simple platform.

Within *Into Math*, data collection is automated; differentiation is targeted, clear, and easy to use; and professional development is embedded. The experience is both intuitive and customizable for teachers, allowing for simplicity in all areas of instruction.

Interim Growth Measure

This powerful growth measure assessment is designed to be administered in 40 minutes, three times per year. The system utilizes a secure bank of assessments to adapt to each student's ability and maps progress on the Quantile Framework®.



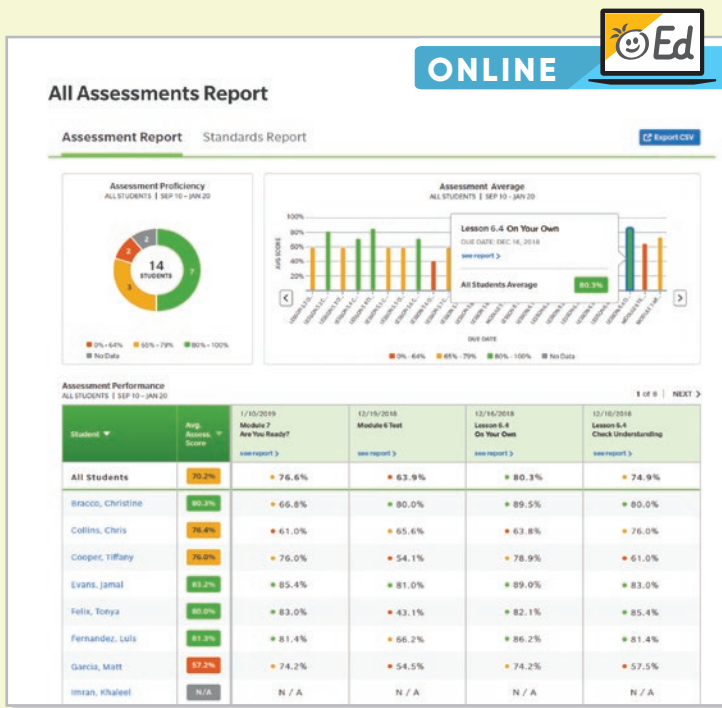
Students can skip questions if needed and access read-aloud support. Feedback that encourages perseverance helps to motivate students.



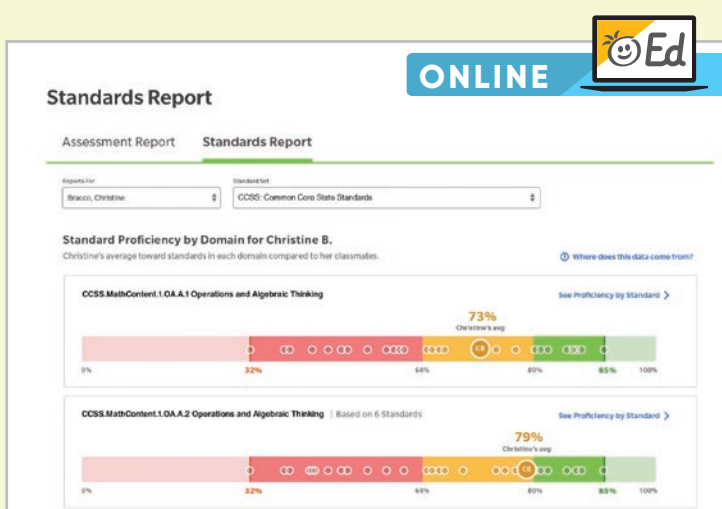
Assessments, Data, and Reports

Dynamic Reporting

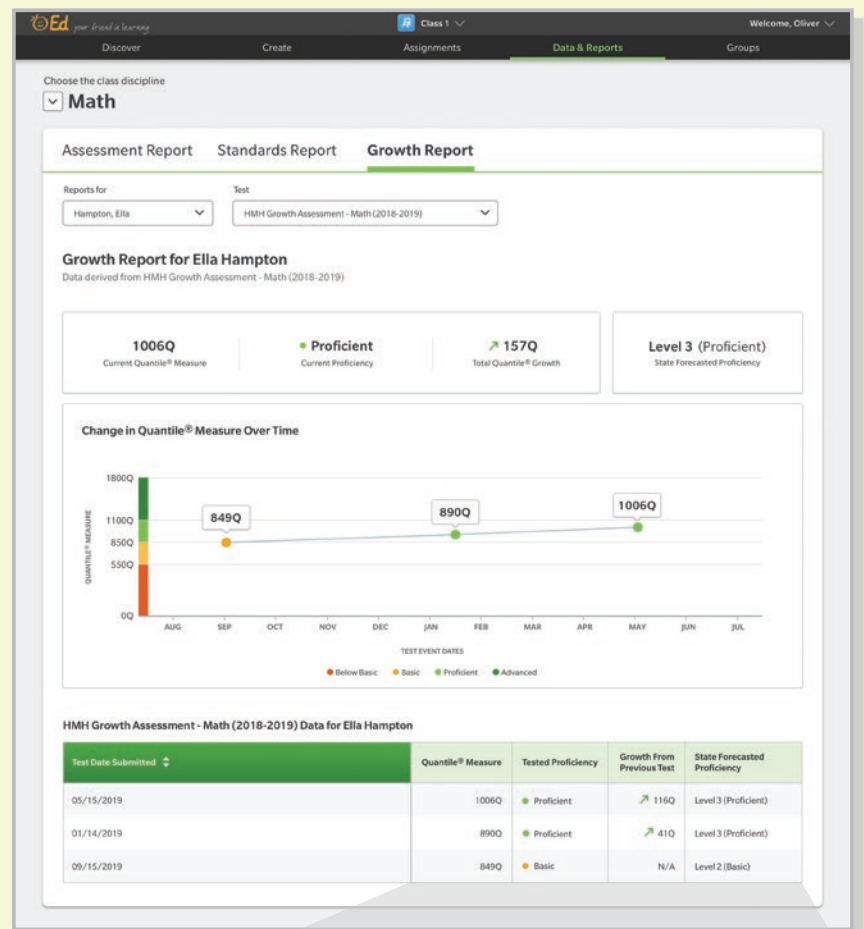
Teachers can drill down into data for deeper insights into student performance. Multiple reports and views enable teachers to select those that work best for them, including charts, detailed comparisons, and totals.



Assignment reports show detailed results for each assignment, including an item analysis view.



Standards reports show progress toward mastery of each of the Mathematics Standards.



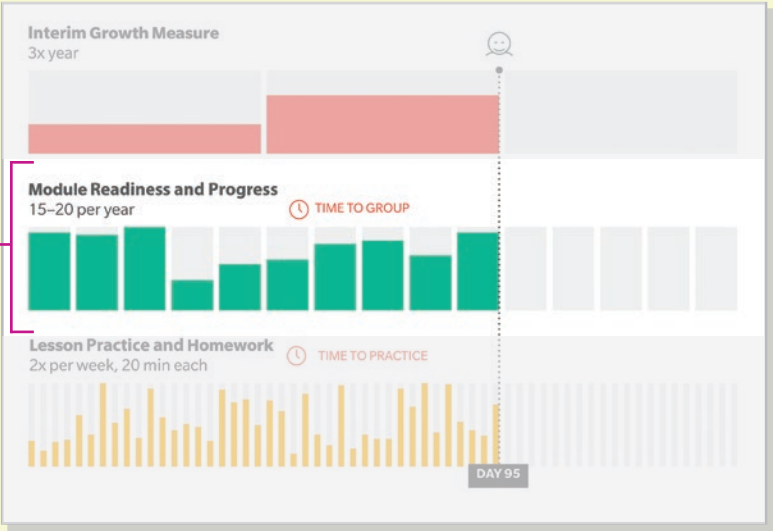
Quantile® Measure	Tested Proficiency	Growth From Previous Test	State Forecasted Proficiency
1006Q	Proficient	116Q	Level 3 (Proficient)
890Q	Proficient	41Q	Level 3 (Proficient)
849Q	Basic	N/A	Level 2 (Basic)

Growth Reports help identify intervention needs and are linked to recommendations and groupings.

Assessments, Data, and Reports

Module Readiness and Progress

Whether you use the autoscored digital assessments or the paper-and-pencil versions in the Assessment Guide, the module assessments make it easy for teachers to leverage data. A variety of reports available on Ed: Your Friend in Learning give you unparalleled insight into student performance.



Module 3

Review

Vocabulary

Use the equation to answer the questions.

1

Circle the addends.

$3 + 7 = 10$

2

Write the equation with the addends in a different order.

$7 + 3 = 10$

Concepts and Skills

Fill in the bubble next to the addition that can be used to solve the problem.

3

Jared sees 5 stars in the sky. Then he sees 4 more. How many stars does Jared see now?

$5 + 4 = 9$

$4 + 8 = 12$

$5 + 5 = 10$

4

Kiaya has 2 red bows and 5 purple bows. How many bows does Kiaya have?

$2 + 3 = 5$

$5 + 2 = 7$

$3 + 5 = 8$

Module 3

one hundred seven 107

The Module Review in the Student Edition helps prepare students for the Module Test. The Module Test is a summative assessment for monitoring student progress. Intervention recommendations are provided for students who need extra support.

Are You Ready?

Complete these problems to review prior concepts and skills you will need for this module.

Ways to Make 5

Use . Show different ways to make 5. Color to show what you did. Possible answer shown.

1

Use Symbols to Add

Use the picture. Write the addition equation.

2

$3 + 7 = 10$

Draw Equal Groups

Draw a circle below each picture to show an equal number of circles and birds.

3

76 seventy-six

The module *Are You Ready?* is a diagnostic assessment of important prerequisite skills for the upcoming module. A Data-Driven Intervention chart is available in the Teacher Edition.

Module 11

Fraction Equivalence and Comparison

Are You Ready?

Parts of a Whole

Choose a fraction for the shaded part.

Which fraction represents the value of the shaded part?

$\frac{1}{4}$

$\frac{1}{2}$

$\frac{3}{4}$

$\frac{1}{2}$

Submit

1 of 8

Vocabulary

Choose the correct term from the Vocabulary box to complete the sentence.

Module Vocabulary

Unit • Equivalent • Benchmark

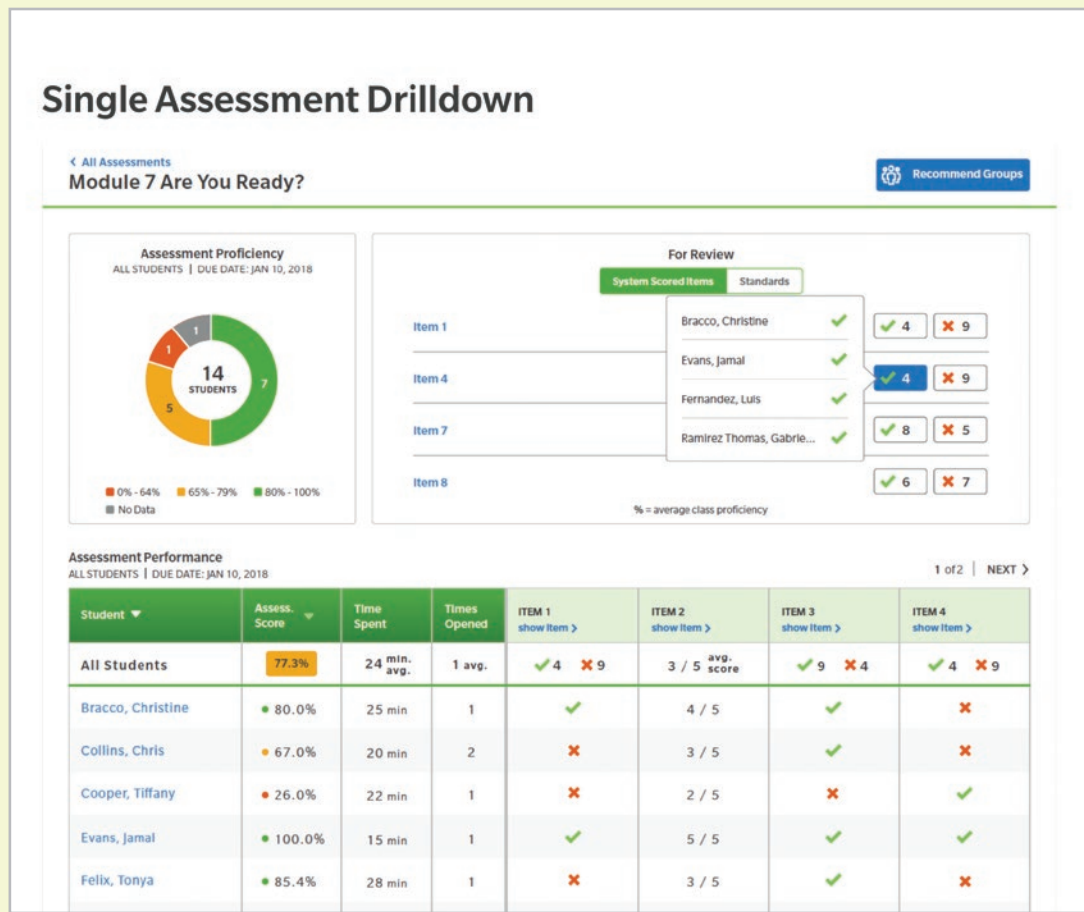
Complete the sentence.

fractions are known amounts that help you understand a fraction of a different size or amount.

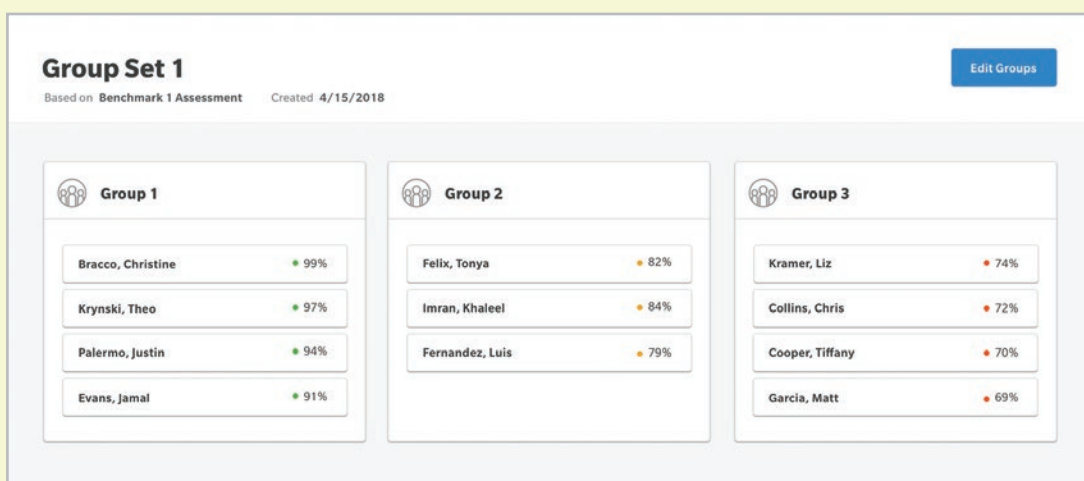
Check

Data-Driven Grouping

One of the most valuable and time-saving tools for teachers is the online Recommend Groups feature. It synthesizes data from assessments and places students into leveled groups. You can easily modify the recommended groups yourself as needed.



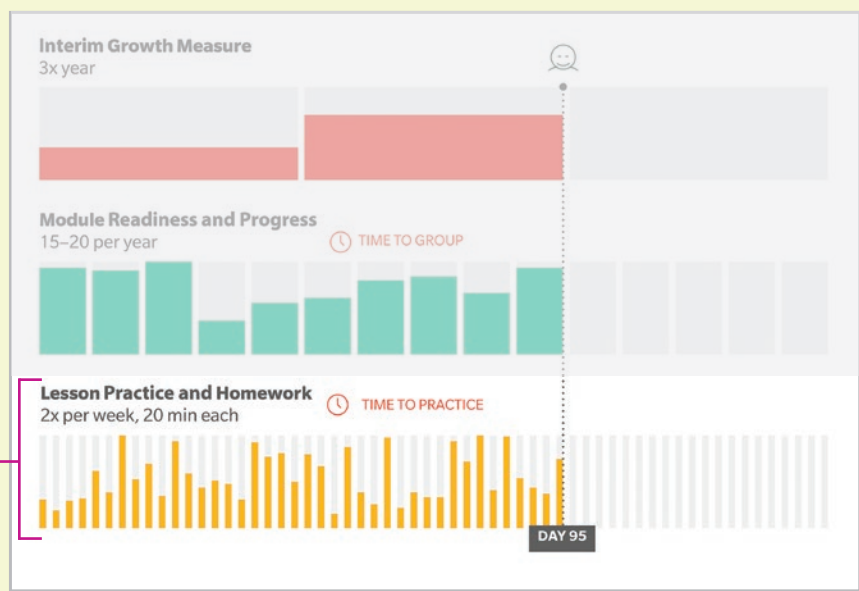
From your groups, assign differentiated resources based on student performance.



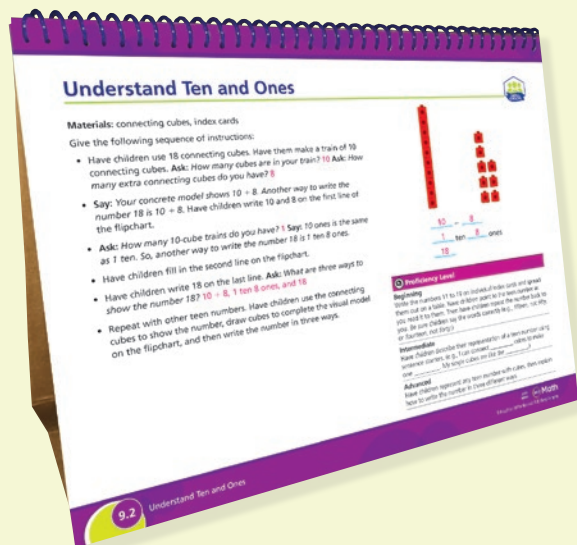
Assessments, Data, and Reports

Lesson Practice and Homework

MAKING SURE EVERY STUDENT GROWS Lesson-level formative assessments and the *Into Math* system reports help teachers differentiate, ensuring every student feels appropriately challenged and makes progress toward lesson goals.



TEACHER EDITION The Teacher Edition shows the variety of differentiated resources available for each lesson.



FLIPCHART Teachers can work with students who have not yet mastered lesson content in small groups using the Tabletop Flipchart Mini-Lesson. It provides an alternative approach to help students who are *Almost There* master lesson content. Small-group activities for students who are *On Track* or *Ready for More* are printed in the Teacher Edition.

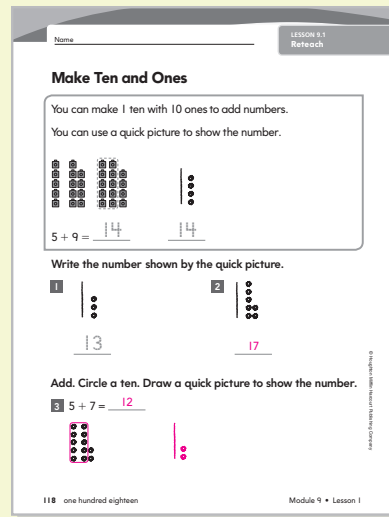


MATH CENTER KIT The differentiated centers kit contains additional resources for use in math centers. These resources include games, readers, standards practice, fluency builders, and projects.

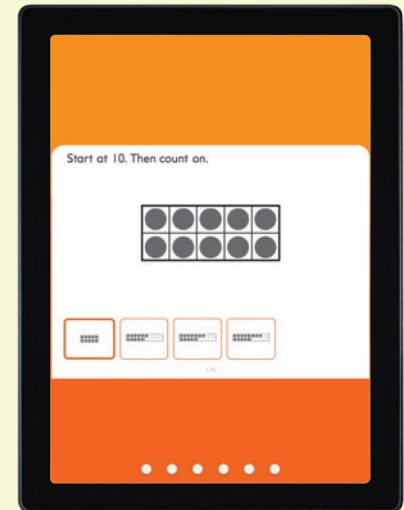
Assessments, Data, and Reports

LEVERAGE THE POWER OF STUDENT DATA

Interactive versions of Reteach, Challenge, Additional Practice, Fluency, Rtl Tier 2, and Rtl Tier 3 worksheets can be assigned online, and teachers can see student results in reports.



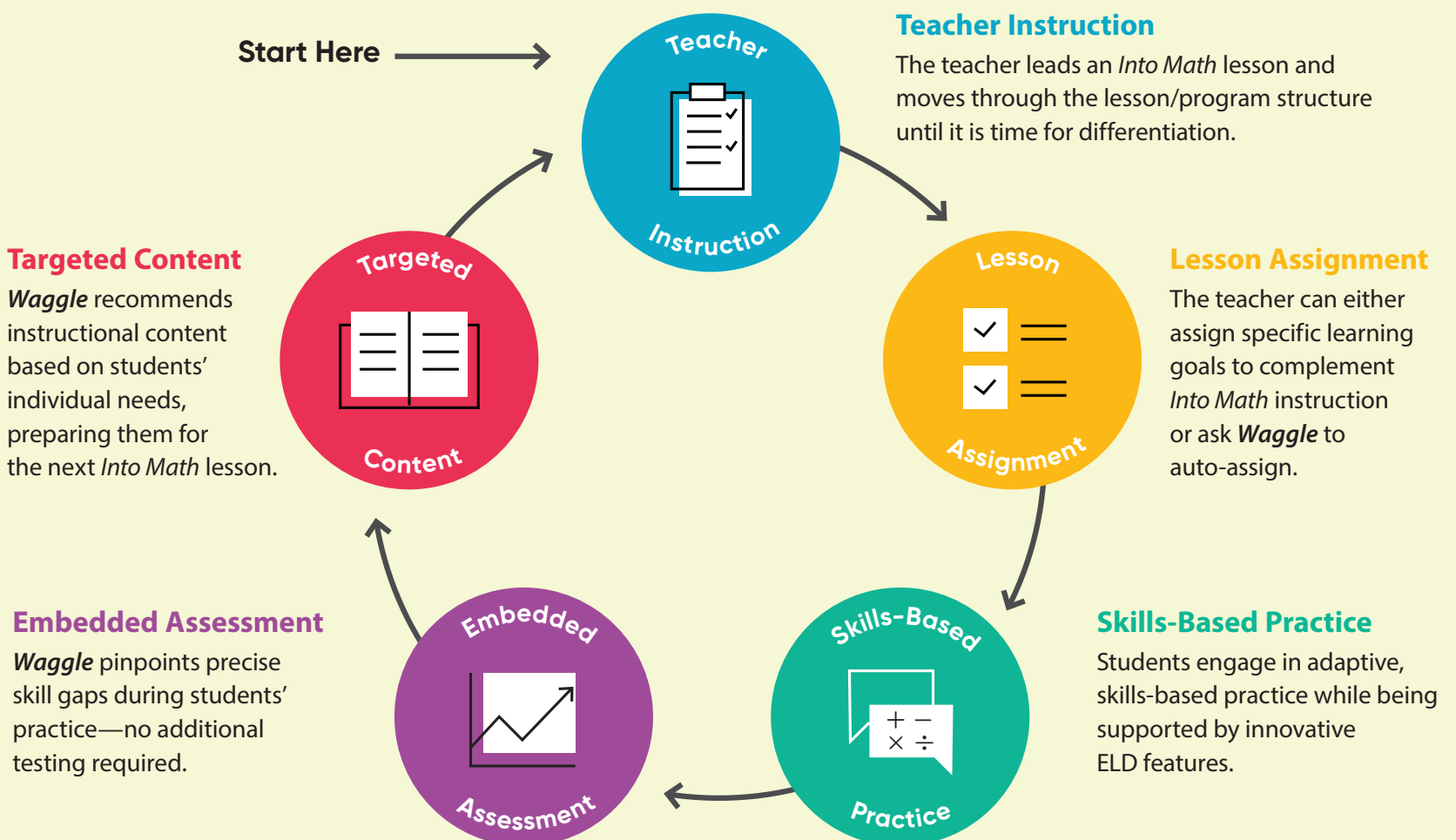
Reteach Worksheet



Interactive Rtl Tier 3

EMPOWER STUDENTS WITH WAGGLE™

Waggle can supplement your *Into Math* instruction by providing adaptive, targeted student practice.



Supporting Best Practices

Into Math classrooms maximize student growth by providing teachers with content designed around research-based, effective teaching practices, such as those described in *Principles to Actions* (NCTM, 2014).¹

- Establish mathematics goals to focus learning.
- Implement tasks that promote reasoning and problem solving.
- Use and connect mathematical representations.
- Facilitate meaningful mathematical discourse.
- Pose purposeful questions.
- Build procedural fluency from conceptual understanding.
- Support productive struggle in learning mathematics.
- Elicit and use evidence of student thinking.

TEACHER TO TEACHER
From the Classroom

Use and connect mathematical representations One of the things I want to find out about my children at the beginning of the year is what mathematical representations they are familiar with. Have they used ten frames, number paths, rekenreks, or pictures of hands? I spend time each day with small groups using visual addition problems, asking children to share their solution strategies. I make notes of who is consistently counting by ones, who is counting on, and whether anyone is using number relationships.

In whole class discussions, I also start asking questions to encourage children to visualize quantities and make connections between representations. If we are talking about the number 12 for example,

I ask children to close their eyes and picture that number on a ten frame. I might ask, "How many ten frames do you need to show 12? How do you know? What would 12 look like with your fingers? What would be colored on a 100 chart?"

After these different representations are sketched and children have justified how each one shows 12, I say something like, "Show me the 2 in each representation. Show me the 10 in each representation. Why is there a 10 and a 2 in each representation?"

Discussions like these help me learn about my new children and start introducing them to tools that we will use all year long.

Teacher to Teacher tips, aligned to the NCTM Effective Mathematics Teaching Practices, were written by educators for educators.

1) National Council of Teachers of Mathematics, *Principles to Actions: Ensuring Mathematical Success for All* (Reston, VA: NCTM, 2014).

Student work samples help teachers understand student thinking behind possible solution pathways.

Show Adding Tens
Strategy 1

Spark Your Learning • Student Samples

During the *Spark Your Learning*, listen and watch for strategies children use. See samples of student work on this page.

Show Adding Tens
Strategy 1

If children . . . draw lines to show the starting number and then draw more lines to show the number of tens they tossed, they demonstrate they can make an accurate visual model. By including the sum, these children also demonstrate an understanding of adding tens.

Have these children . . . share their work with the class. **Ask:**

- How does drawing a visual model help you understand the problem?

Show Combined Group
Strategy 2

If children . . . toss a 5 and draw lines to show 7 tens and indicate the value by writing the number, they may have shown the solution correctly, but the model does not match the action of the problem. To help children learn how to make effective visual models, guide them to show the action in the problem.

Activate prior knowledge . . . by having these children draw another visual model. **Ask:**

- What is the action in the problem?
- How can you draw the tens to show you are adding them together?

COMMON ERROR: Shows Ones not Tens

Carefully crafted tasks, student-centered learning, small groups, and hands-on manipulatives play important roles in an *Into Math* classroom. The *Into Math* Teacher Edition contains point-of-use support to help teachers facilitate learning and implement research-based best practices into their instruction.

Every module includes a professional learning video that features a teacher or HMH author working with real students who are engaging with actual content from the program. The videos include modeling and discussion of effective teaching practices and also feature the Language Routines and Talk Moves strategies.



Leveled Questions and Sample Guided Instruction features help teachers ask questions that facilitate student understanding without giving away the answer.

2 Learn Together

Build Understanding

Task 1 **Use Structure** Encourage children to use place value to show tens visually and solve a simpler equivalent equation. $3 + 4 = 7$, $3 \text{ tens} + 4 \text{ tens} = 7 \text{ tens}$, and $30 + 40 = 70$

CONNECT TO VOCABULARY
Have children use the **Interactive Glossary** during this conversation to record their understanding.

CONNECT MATH IDEAS, REASONING, AND LANGUAGE **Compare and Connect**
Before beginning the task, have children define the word **equation** in their own words.

Sample Guided Discussion:

What do you need to do to solve the problem?
Possible answer: I add the two numbers.

Turn and Talk While children talk, listen to verify they use appropriate language to explain their reasoning. **Possible answer:** $3 + 4 = 7$, and 7 tens is equal to 70, so $30 + 40 = 70$.

Build Understanding

The Beach Shop has 30 adult sunglasses and 40 child sunglasses. How many sunglasses does the shop have?

How can you show the problem?

Check children's work. **Possible drawing:**

3 tens + 4 tens = 7 tens

How can you write an equation to solve the problem?
Possible equation shown: $30 + 40 = 70$

The shop has 70 sunglasses.

Turn and Talk Does your answer make sense? How do you know? **See possible answer at the left.**

3 Check Understanding

Formative Assessment

Use formative assessment to determine if your children are successful with this lesson's learning objective.

Children who successfully complete the Check Understanding can continue to the On Your Own practice.

For children who missed the Check Understanding problem, work in a pulled small group using the Tabletop Flipchart Mini Lesson.

Assign the Digital Check Understanding to determine:

- success with the learning objective
- items to review
- grouping and differentiation resources

4 Differentiation Options

Differentiate instruction for all children using small-group mini-lessons and math center activities on page 349C.

Network

Challenge



Empowering Teachers

Into Math is designed to provide opportunities for each and every student to grow. Formative assessment and effective differentiation are critical to student success. However, care must be taken not to turn classrooms into unintentional tracking systems, which often create gates instead of gateways. Access to effective teaching and learning, a high-quality curriculum, and high expectations promote equitable math classrooms.



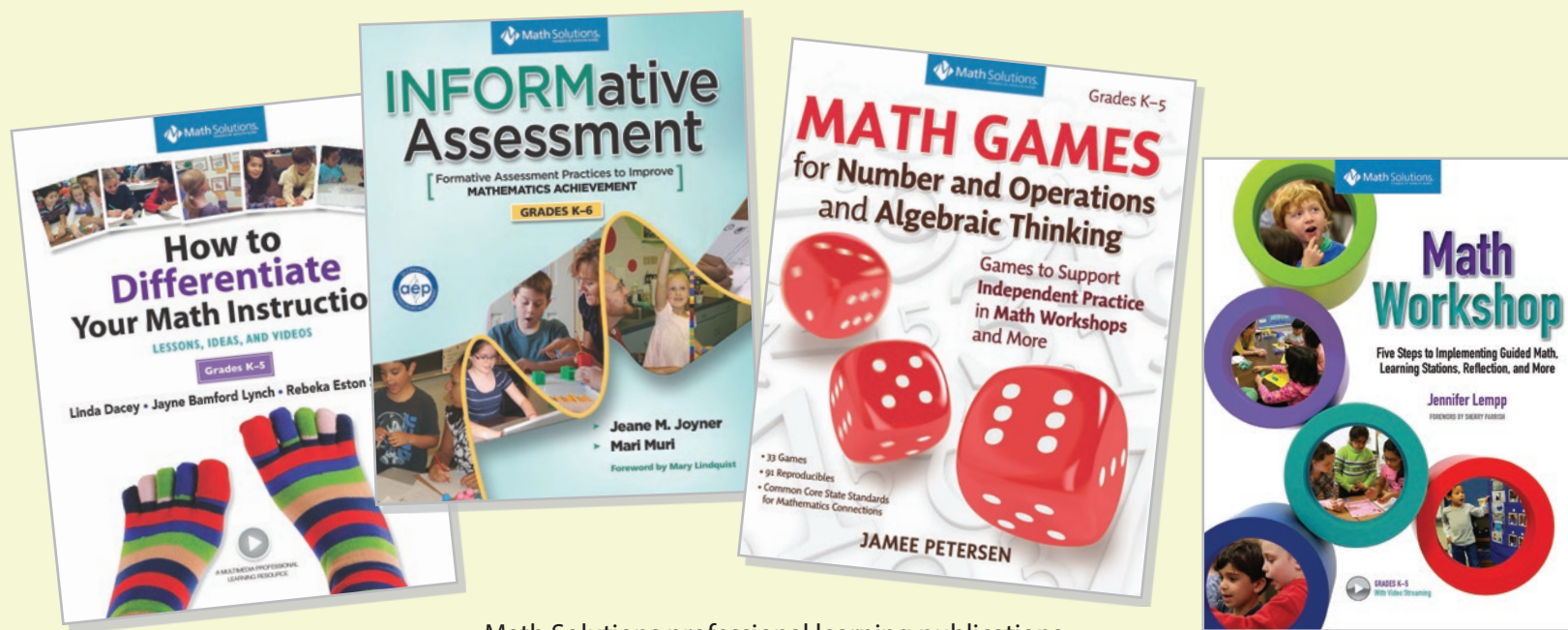
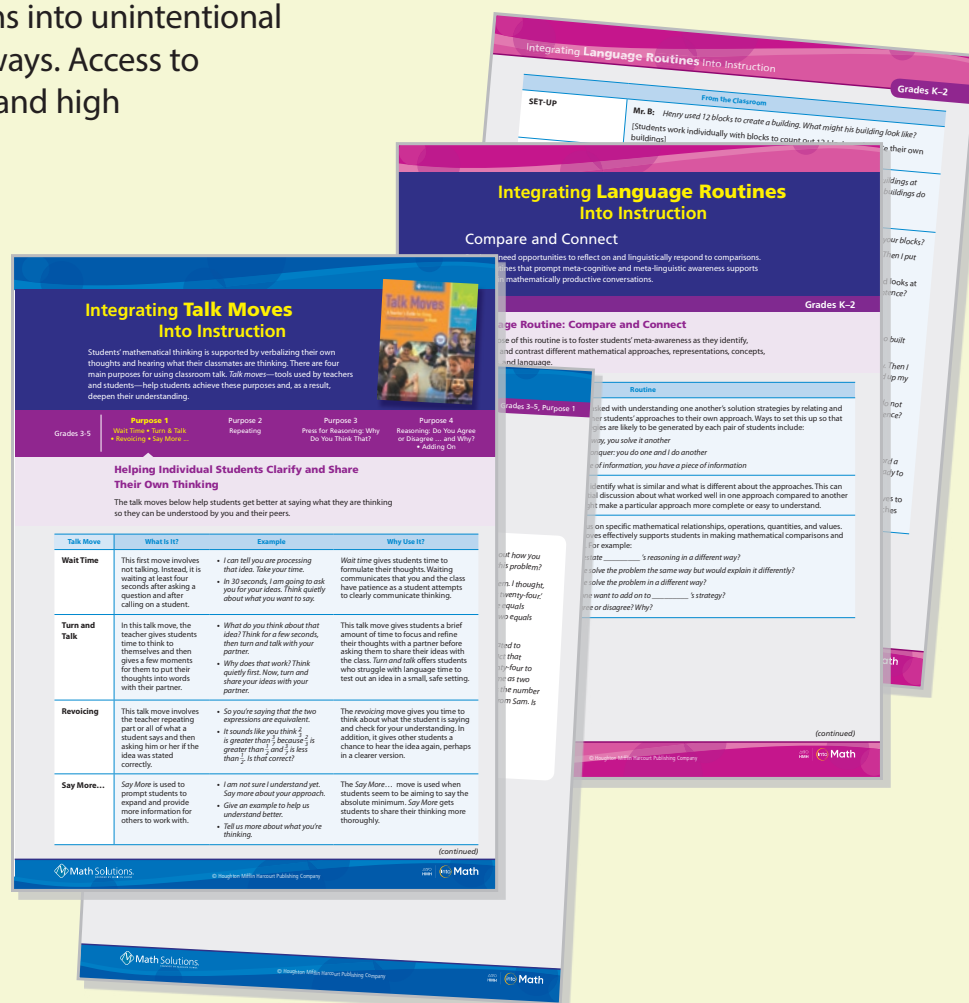
Professional Learning Cards help teachers effectively implement the Talk Moves and Language Routines, ensuring student reasoning and discourse play a key role in instruction.

Talk Moves

- Adding On
- Reasoning
- Repeating
- Revoicing
- Turn and Talk
- Waiting

Language Routines

- Three Reads
- Critique, Correct, and Clarify
- Stronger and Clearer Each Time
- Compare and Connect



Math Solutions professional learning publications, available to enhance your professional library, are referenced in the *Into Math* Teacher Edition.

Matthew R. Larson, PhD
 Past President, National Council
 of Teachers of Mathematics
 Lincoln Public Schools
 Lincoln, Nebraska
 Math Solutions Senior Fellow



Ensuring Access and Equity

Access

Access and equity are a guiding principle of effective mathematics programs in which each and every student has access to effective instruction, high expectations, high-quality curriculum, and the support necessary to learn mathematics at a deep level (NCTM, 2014). *Into Math* provides the structure and resources needed to effectively differentiate instruction and support student learning.

The *Into Math* curriculum is rigorous and supports students' conceptual understanding, procedural fluency, and reasoning and problem-solving abilities through an intentional lesson and module design. *Into Math's* frequent and embedded data checkpoints—linked to targeted instructional supports in print, digital, small-group, and math center options—are designed to ensure that each and every student has access to *Into Math's* high-quality curriculum.

Equitable Instructional Practices

Mathematics teaching involves more than helping students acquire concepts and skills; it also includes supporting students in coming to see themselves as capable of learning, participating in, and becoming users of mathematics. Implementing equitable instructional practices can improve students' classroom experience, learning outcomes, and disposition toward mathematics.

The mathematics teaching practices included in *Into Math* provide an instructional framework for cultivating students' confidence and belief in their ability to learn and use mathematics. For example, the tasks in Spark Your Learning are designed as "low-floor/high-ceiling" tasks that all students can access but that can also be extended to provide challenge. These tasks motivate learning, focus on building students' conceptual understanding to help ensure procedural fluency, encourage the use of multiple representations, and help students develop a positive disposition toward mathematics and themselves as learners.

Similarly, Turn and Talk prompts position students as mathematically competent and capable of sharing their thinking and participating in mathematical arguments. Through discourse, students realize that their thinking serves an important role in learning mathematics and cultivate their confidence as learners¹, which, in turn, improves the learning outcomes of each and every student.



Turn and Talk How does knowing $6 + 4 = 10$ help you find $10 - 6 = \blacksquare$? Explain.

1) D. Huinker & V. Bill, *Taking Action: Implementing Effective Mathematics Teaching Practices in K–Grade 5*, ed. M. S. Smith (Reston, VA: NCTM, 2017).

Teacher Support

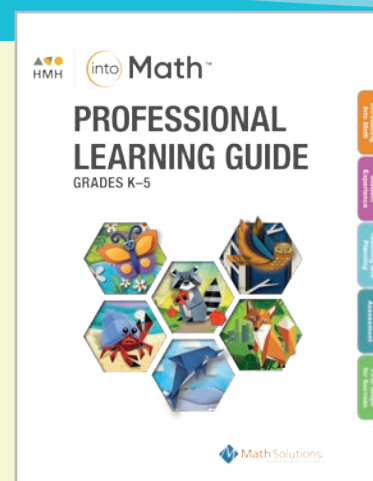
Building a Culture of Professional Growth

A blend of in-person and online support with Math Solutions® coaches fosters a culture of professional growth and inspires a culture of math achievement with every student, in every classroom, every day.

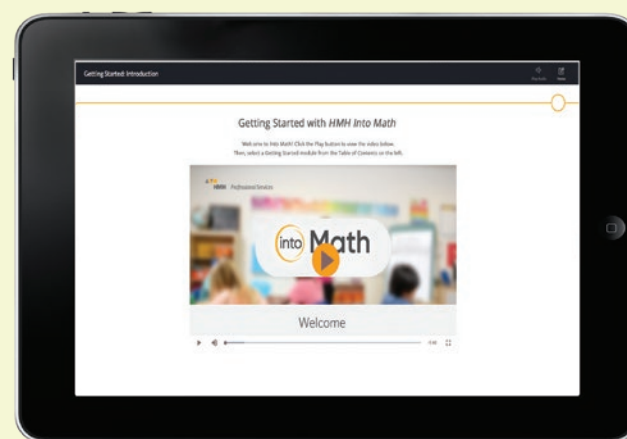
Coaches from Math Solutions® will work side by side with teachers to develop instructional practices that promote reasoning and problem-solving skills. Our goal is to support teachers as they create learning environments where students are encouraged to become fearless problem solvers.



Math Solutions® Partner with Math Solutions® to deepen your practice to meet the learning needs of each and every student and effectively maneuver the challenges you face in your classroom every day.



During the *Getting Started with Into Math* session, teachers receive a Professional Learning Guide. The Professional Learning Guide is also available on Ed: Your Friend in Learning.



Getting Started Modules can be accessed anywhere and anytime on Ed: Your Friend in Learning.



The single greatest determinant for success in a classroom is the teacher. Math Solutions® coaches partner with you as you make critical decisions that impact student learning.

Weston Kieschnick
Associate Partner
International Center for
Leadership in Education
Littleton, Colorado



Blended Learning That Works

Purposeful Technology Use + Old-School Wisdom

We know that digital tools and future-focused learning environments are critical when preparing our students for the real world. But what about the tried-and-true teaching strategies that have always driven real and measurable learning? Where do these fit in?

The Bold School Framework for Strategic Blended Learning™ puts teachers back into the digital learning equation. Its practical yet powerful approach shows how purposeful technology use combined with old-school wisdom can elevate instruction and enhance learning.

Effective 21st-century learning blends sound pedagogical practices with digital elements to create engaging rigorous and relevant experiences. As educators, we are accountable for the learning outcomes and career readiness of our students. Technology and digital tools, when implemented strategically to enhance—not replace—sound pedagogy, create effective and efficient blended learning experiences for students. Here’s how it works.

Bold School Framework for Strategic Blended Learning™	
Step 1	Identify Desired Academic Outcome(s)
Step 2	Select a Goal-Aligned Instructional Strategy That <i>Works</i>
Step 3	Choose Digital Tool(s)
Step 4	Plan Blended Instruction
Step 5	Self-Assess Your Plans and Progress with a Framework

The goal of using technology isn’t just to use technology—it’s student achievement. We must approach blended learning with greater intention than just “What am I going to do with (insert tech tool here) today?” With this mindset, every teacher can support students through the power of digital learning.



Fostering Learning Mindsets



Through a partnership with Mindset Works®, *Into Math* incorporates the latest research, strategies, and practices to build a community of resilient, curious learners.

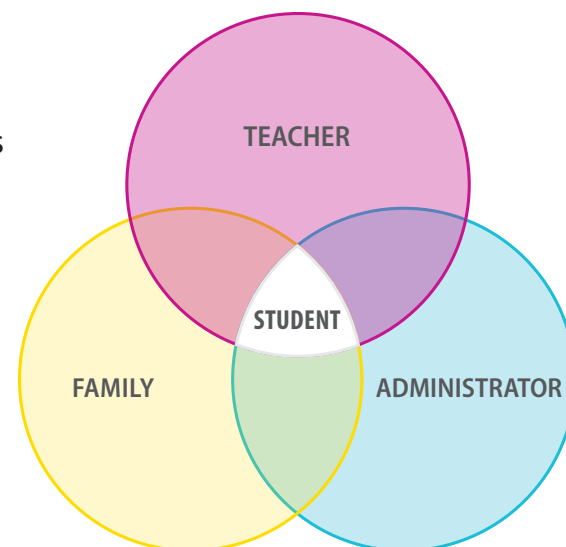
- Introduce the learning mindsets—growth mindset, relevance, belonging, and purpose—to help students better understand their self perception and attitudes toward learning.
- Establish the tenets of growth mindset, so that each student understands that he or she has the capacity to learn and grow.
- Target the research-based stances and skills that are key to student agency, engagement, and academic success.



Connect with Families and Community

Engaging with families and the community is critical to student success in school. *Into Math* provides resources to help teachers interact with families throughout the school year.

- **Math on the Spot** video tutorials provide instruction of the math concepts covered and allow for family involvement in their child's learning. The write-in format of the Student Edition gives families a front-row seat to their child's thinking and progress over time, encouraging a strong home-school connection.
- **School Home Letters** inform families about the skills, strategies, and topics students are encountering at school, extending rich dialogue beyond the classroom.



David Dockterman, EdD

Lecturer, Harvard Graduate
School of Education
Cambridge, Massachusetts



Understanding Mindset

Into Math fosters a growth mindset by explicitly teaching students that intelligence is not a fixed trait, but rather hard work and determination are crucial factors in raising academic achievement. Students often believe that their ability to excel in mathematics is fixed. Carol Dweck, a psychologist at Stanford University and leading researcher in student motivation and development, highlights the academic benefits of adopting a “growth” mindset rather than a “fixed” mindset.

Growth Mindset

Growth mindset is the idea that intelligence and abilities can be developed through dedication and work. “This view creates a drive towards learning and a resilience that is essential for great accomplishment. Virtually all great people have had these qualities.”¹ Instruction and classroom community can foster a growth mindset by explicitly teaching that effort has a meaningful impact on learning.² Students with a growth mindset believe:

- Practice and effort are key elements in developing intelligence.
- Persistence and perseverance are important factors in triumphing over setbacks and failures.
- Mistakes and struggle are part of the learning process.

Fixed Mindset

Students who have a fixed mindset believe that intelligence and abilities are fixed traits that cannot be developed. Students who view their intelligence as fixed from birth are more likely to experience decreased confidence and performance when faced with challenges.³ Students with a fixed mindset

- believe intelligence is a fixed quantity that you either possess or lack,
- put in less effort and give up easily, and
- fear failure and are less likely to take risks.

Teaching Growth Mindset

Feedback and classroom discourse can have a lasting impact on how students view intelligence.⁴ By adopting a growth mindset and productive learning strategies, students are more likely to step up to challenges and persevere through and bounce back from adversity. Use the following strategies:

- Teach that intelligence and abilities are developed.
- Praise students’ efforts and strategies rather than their intelligence.
- Use “mistakes” or incorrect answers as teachable moments.

1) C. Dweck, *Mindset: The New Psychology of Success*. (New York, NY: Penguin Random House, 2006).

2) L.S. Blackwell, K.H. Trzesniewski, C.S. Dweck, “Theories of Intelligence Predict Achievement Across an Adolescent Transition: A Longitudinal Study and an Intervention,” *Child Development* 78, no. 1 (January-February 2007): 246–263.

3) Blackwell, Trzesniewski, Dweck, “Theories of Intelligence . . .,” 246–263.

4) M. Malmivuori, “Affect and Self-Regulation,” *Educational Studies in Mathematics* 63, no. 2 (October 2006): 149–164.

Unpacking Math Standards

Into Math is built on a carefully crafted Learning Spine based on the Mathematics Standards, with a coherent progression from kindergarten through algebra and beyond. The *Into Math* system allows for easy access forward or backward across the K–12 Mathematical Progressions, providing teachers with the tools to navigate prerequisite and follow-on concepts and skills.

Every lesson includes support that addresses the focus and coherence within the *Into Math* curriculum, derived directly from the Mathematics Standards. Clear progressions along the path to algebra provide insight into Prior Learning and Future Connections and the point-of-use tools necessary to differentiate instruction based on student data.

12.1 Represent Adding Tens

Build Understanding

LESSON FOCUS AND COHERENCE

Mathematics Standards

Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

Learning Objective

Add tens to decade numbers.

Language Objective

Explain how to add tens to tens.
Explain how to use equations to show problems.

Vocabulary

Review Vocabulary: equations, ones, tens

Lesson Materials: base-ten blocks, number cube, connecting cubes

Mathematical Practices and Processes

Reason abstractly and quantitatively.
Model with mathematics.
Look for and make use of structure.

I Can Objective

I can add multiples of ten with multiples of ten.

Mathematical Progressions

Prior Learning	Current Development	Future Connections
Children: <ul style="list-style-type: none"> composed and decomposed numbers 11 to 19 into tens and ones. (GrK, 17.1–17.4) used drawings and equations to show how to compose and decompose numbers. (GrK, 17.1–17.4) 	Children: <ul style="list-style-type: none"> add two-digit numbers with a multiple of ten, within 100. use concrete models, drawings, and strategies to solve and reason problems. understand how to add two-digit numbers with multiples of ten. 	Children: <ul style="list-style-type: none"> will use addition and subtraction within 100 to solve various problem types. (Gr2, 15.1–15.3) will solve addition and subtraction problems using drawings and equations with a symbol for the unknown number. (Gr2, 14.1–14.4)

UNPACKING MATH STANDARDS

Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

What It Means to You

In this lesson, only a portion of the standard is taught. Children learn to add two-digit numbers with tens, by adding tens with tens. Children practice the concept by solving word problems using concrete models and visual models, and then write matching equations.

Before children can attain proficiency with addition and subtraction, they require plenty of experiences - modeling and solving various problem types with the unknown quantity in various positions in the equation.

The Learning Arc within modules or across modules carefully sequences instruction, allowing for students to first build understanding of concepts, then to bridge their understanding by making connections between concepts, and finally to move to procedural fluency through application and practice.

MODULE 12

PLANNING

UNDERSTAND ADDITION AND SUBTRACTION WITH TENS AND ONES

Introduce and Check for Readiness

Module Opener
Are You Ready?

Lesson 1—1 Day

Build Understanding

Represent Adding Tens

Learning Objective: Add tens to decade numbers.
Online Professional Learning Video
Review Vocabulary: equations, tens, ones

Lesson 2—1 Day

Build Understanding

Represent Subtracting Tens

Learning Objective: Subtract tens from decade numbers.

Lesson 3—1 Day

Connect Concepts and Skills

Add or Subtract Tens

Learning Objective: Add and subtract multiples of ten from decade numbers. Write and solve equations that match the word problems.

Lesson 4—1 Day

Connect Concepts and Skills

Use a Hundred Chart to Add

Learning Objective: Use a hundred chart to add ones and tens to a two-digit number and write the equation that matches the problem.
Online Professional Learning Video

Lesson 5—1 Day

Connect Concepts and Skills

Represent Addition with Tens and Ones

Learning Objective: Use concrete models to add multiples of ten or ones to two-digit numbers and write equations to solve the problem.

Lesson 6—2 Days

Connect Concepts and Skills

Represent Make Ten to Add

Learning Objective: Add a two-digit number and a one-digit number by making a ten using concrete models and visual models and write an equation to show the problem.

Lesson 7—1 Day

Connect Concepts and Skills

Represent Make Ten to Add with a Visual Model

Learning Objective: Use an open number line to add tens and ones to two-digit numbers by making a ten and write an equation to show the problem.

Lesson 8—1 Day

Apply and Practice

Use Mental Math to Find 10 Less and 10 More

Learning Objective: Use mental math to find 10 less than and 10 more than a number.

Assessment

Module 12 Test (Forms A and B)
Unit 4 Performance Task after Module 13

See the entire scope and sequence in the Planning and Pacing Guide.

Build Understanding

Connect Concepts and Skills

Apply and Practice

Timothy D. Kanold, PhD
Mathematics Educator
Chicago, Illinois



Progressions and Algebra Readiness

Algebra Readiness in 2020 and Beyond

Algebra as a course of study today is integrated around four progressions of elementary and middle school content leading to the algebra course: Number and Operations, Operations and Algebraic Thinking, Statistics and Probability, and Functions.

	Grades K–5	Grades 6–7	Grade 8 and Algebra
1	Number and Operations Base Ten	The Number System Extended	Expand to Numbers Not Rational
2	Operations and Algebraic Thinking	Writing, Interpreting, and Using Expressions and Equations	Modeling with and Solving Linear Equations and Systems
3	Measurement and Data	Statistics and Probability Variability, Inferences, and Chance	Statistics and Probability Bivariate Data, Lines of Best Fit
4	Number and Operations Fractions	Analyze and Apply Ratios and Proportional Relationships	Functions Define, Evaluate, and Compare

The Operations and Algebraic Thinking progression strand is unique to the K–5 preparation for the algebra readiness curriculum.

The Operations and Algebraic Thinking Progression

Operations and Algebraic Thinking is a K–5 progression that feeds directly into the middle school progression for linear expressions and equations.

At grade levels K–2, this progression focuses on counting, place value, and addition and subtraction of whole numbers. The emphasis is on representing and solving Add To, Take From, Put Together/Take Apart, and Compare problem situations for addition and subtraction. This work will help students to “see” multiplication as groups of objects and as represented by a rectangular array or model in Grades 3–5. Conceptual building blocks are developed for the eventual multiplication of whole numbers.

At grade levels 3–5, this progression expands into the conceptual student understanding needed for students to “see” patterns, properties, and expressions in problem situations—the early foundations of what will become known as algebra. These progressions include multiplication and division problem situations with equal groups, arrays, area, and comparisons. Third graders focus on fluency when multiplying and dividing within 100, fourth graders analyze shape and number patterns, and fifth graders use problem situations that allow them to both write and interpret numerical expressions based on earlier student work with whole numbers.

Teacher Support

Supporting Intervention Needs

Into Math provides the supports teachers need to ensure each and every student succeeds. Data informs teachers' use of differentiated Small-Group and Math Center options in every lesson. *Into Math* includes intervention content for use in a core classroom.

Name _____

Add in Any Order
Skill 10

Learn the Math
You can change the order of the addends. The sum is the same.

3 + 2 = 5
↑ ↑
addends sum

There are 5 cars in all.

Change the order of the addends. Write the addition sentence.

2 + 3 = 5
↑ ↑
addends sum

There are 5 cars in all.

Write the sum. Change the order of the addends. Write the addition sentence.

4 + 2 = 6 2 + 4 = 6

Response to Intervention • Tier 2

Vocabulary
order
addend

Name _____

Add and Subtract
Skill 11

Learn the Math
Use and to add. Write the sum. Break apart to subtract. Write the difference.

1 2 + 2 = 4

4 - 2 = 2

2 1 + 4 = 5

5 - 4 = 1

Response to Intervention • Tier 3

Appropriate Tier 2 and Tier 3 Mini-Lessons address prerequisite concepts and skills needed for success and can be identified by the diagnostic *Are You Ready?* module assessment.

Every lesson includes a Teacher Tabletop Flipchart Mini-Lesson and a lesson Reteach to support students' Tier 1 needs.

Do The Math

Created by
Marilyn Burns

Houghton
Mifflin
Harcourt

÷ ▲ + ×

Name _____

LESSON 12.1
Reteach

Represent Adding Tens

Find 30 + 20.
Draw to show the problem.

30 20

So, 30 + 20 = 50.

3 tens + 2 tens = 5 tens
5 tens = 50

Draw tens to show the problem. Solve.

1 20 + 40 =

2 10 + 40 =

10 + 40 = 50

60 + 20 =

0 + 20 = 20

one hundred forty-five 145

Represent Adding Tens

Materials: base-ten blocks, index cards

Give the following sequence of instructions:

- Review the meaning of the word equation. Have children give an example of an equation.
- Read the word problem aloud: Mia reads for 20 minutes on Wednesday and 30 minutes on Thursday. How many minutes does she read in all?
- Ask: What do you need to find to solve this problem? How can you solve it? I need to find the sum. I can model or draw tens. Then I can write an equation.
- Have children represent the problem using base-ten blocks. Ask: How many tens will you use to show 20? 30? I use 2 tens for 20 and 3 tens for 30.
- Have children use the flipchart to verify that the quick pictures match the base-ten model they made.
- Have children write the equation on the flipchart. Guide children to connect each part of the word problem and the quick picture to each part of the equation.
- Make up other word problems involving adding tens. Have children use the flipchart to draw tens and complete the equation to find the sum. Have children explain what part of the word problem each number in the equation represents.

Inefficiency Level

Beginning
Draw a quick picture of 1 ten. Write 10, and have children say the word. Draw a quick picture of 2 tens. Write 20, and have children say the word. Continue to 9 tens or 90. Point to each line and say the word. Continue to 9 tens or 90. Point to each line and say the word. Continue to 9 tens or 90. Point to each line and say the word. Continue to 9 tens or 90. Point to each line and say the word.

Intermediate
Have children draw quick pictures for 10, 20, 30 and 40 on four index cards and write the numbers on four more cards. Pairs of children then choose two cards, draw a picture for the sum, and say the number.

Advanced
Have children explain how they solve a problem involving adding tens. They should reference quick pictures and use the words tens, plus, and equation.

12.1 Represent Adding Tens

HMH also offers robust Intervention Solutions for students who need targeted and intensive intervention. Developed by Marilyn Burns, *Do the Math* has thirteen modules that are organized into four topics—Addition and Subtraction, Multiplication, Division, and Fractions. These modules provide carefully scaffolded instruction to build conceptual understanding and develop numerical reasoning. See pages PG72–PG73.

- grades 1 and up
- can be used during core instruction or in a separate instruction block
- effective and easily managed instruction with embedded assessments
- includes digital resources
- six weeks of 30-minute lessons in each module

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Notes & Reflections

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Lesson	Mathematics Standards, Grade K	Pacing
Unit 1 COUNT SEQUENCE AND NUMBERS TO 5		
Module 1: Represent Numbers to 5 with Objects		
Lesson 1.1 Represent 1 and 2	<ul style="list-style-type: none">When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	1 day
Lesson 1.2 Represent 3 and 4	<ul style="list-style-type: none">When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	1 day
Lesson 1.3 Represent 5	<ul style="list-style-type: none">When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	1 day
Lesson 1.4 Represent 0	<ul style="list-style-type: none">When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	1 day
Lesson 1.5 Ways to Make 5	<ul style="list-style-type: none">Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).	1 day


- Major
- Supporting
- Additional

In addition to the core instructional pacing, HMH recommends the following:

- 3 days per year for the Growth Measure assessments
 - 2 days per module for the Module Opener, Are You Ready?, Module Review, and Module Test
 - 1 day per unit for the Performance Task
- Using these recommendations, the total pacing for Grade K is 162 days.

Lesson	Mathematics Standards, Grade K	Pacing
Module 2: Represent Numbers to 5 with a Written Numeral		
Lesson 2.1 Count and Write 0 and 1	<ul style="list-style-type: none"> ■ Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). ■ When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. 	1 day
Lesson 2.2 Count and Write 2 and 3	<ul style="list-style-type: none"> ■ Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). ■ When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. ■ Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1 day
Lesson 2.3 Count and Write 4 and 5	<ul style="list-style-type: none"> ■ Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). ■ When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. ■ Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1 day
Lesson 2.4 Count and Write Numbers to 5	<ul style="list-style-type: none"> ■ Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). ■ When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. ■ Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1 day
Lesson 2.5 Count and Order to 5	<ul style="list-style-type: none"> ■ Understand that each successive number name refers to a quantity that is one larger. ■ When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. 	1 day

Pacing Guide

	Build Understanding
	Connect Concepts and Skills
	Apply and Practice

Lesson	Mathematics Standards, Grade K	Pacing
Module 3: Matching and Counting Numbers to 5		
 Lesson 3.1 Identify a Greater Number of Objects Within 5	 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	1 day
 Lesson 3.2 Identify a Lesser Number of Objects Within 5	 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	1 day
 Lesson 3.3 Match Equal Groups of Objects Within 5	 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	1 day
 Lesson 3.4 Compare Groups Within 5 by Counting	 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	1 day
 Lesson 3.5 Compare Groups Within 5 by Matching	 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	1 day
 Lesson 3.6 Compare Numbers Within 5	 Compare two numbers between 1 and 10 presented as written numerals.	1 day
Module 4: Classify, Count, and Sort Objects		
 Lesson 4.1 Classify and Count by Color	 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	1 day
 Lesson 4.2 Classify and Count by Shape	 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	1 day
 Lesson 4.3 Classify and Count by Size	 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	1 day
 Lesson 4.4 Classify, Count, and Sort by Count	 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	1 day
Module 5: Add To and Take From Within 5		
 Lesson 5.1 Act Out Addition Problems Within 5	 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.  Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	1 day
 Lesson 5.2 Act Out Subtraction Problems Within 5	 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.  Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	1 day

Lesson	Mathematics Standards, Grade K	Pacing
Lesson 5.3 Solve Add To Problems Within 5	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 5.4 Solve Take From Problems Within 5	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 5.5 Write Addition Equations Within 5	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 5.6 Write Subtraction Equations Within 5	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 5.7 Solve Result Unknown Word Problems Within 5	<ul style="list-style-type: none"> Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. Fluently add and subtract within 5. 	2 days
Module 6: Put Together and Take Apart Within 5		
Lesson 6.1 Represent Addition Problems Within 5 Using Objects and Drawings	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	1 day
Lesson 6.2 Represent Subtraction Problems Within 5 Using Objects and Drawings	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	1 day
Lesson 6.3 Solve Put Together Problems Within 5	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days




Pacing Guide






- Build Understanding
- Connect Concepts and Skills
- Apply and Practice

Lesson	Mathematics Standards, Grade K	Pacing
Module 6: Put Together and Take Apart Within 5		
Lesson 6.4 Solve Take Apart Problems Within 5	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 6.5 Represent Addition Using Mental Images	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 6.6 Represent Subtraction Using Mental Images	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 6.7 Solve Word Problems Within 5	<ul style="list-style-type: none"> Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. Fluently add and subtract within 5. 	2 days
Unit 2 COUNT SEQUENCE AND NUMBERS TO 10		
Module 7: Represent Numbers 6 to 10 with Objects		
Lesson 7.1 Represent 6 and 7	<ul style="list-style-type: none"> When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. 	1 day
Lesson 7.2 Represent 8 and 9	<ul style="list-style-type: none"> When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. 	1 day
Lesson 7.3 Represent 10	<ul style="list-style-type: none"> When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. 	1 day

Lesson	Mathematics Standards, Grade K	Pacing
Module 8: Represent Numbers 6 to 10 with a Written Numeral		
Lesson 8.1 Count and Write 6 and 7	<ul style="list-style-type: none"> Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. 	1 day
Lesson 8.2 Count and Write 8 and 9	<ul style="list-style-type: none"> Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. 	1 day
Lesson 8.3 Count and Write 10	<ul style="list-style-type: none"> Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. 	1 day
Lesson 8.4 Count and Order to 10	<ul style="list-style-type: none"> Understand that each successive number name refers to a quantity that is one larger. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. 	1 day
Module 9: Use the Count Sequence to Count to 100		
Lesson 9.1 Count to 100 by Ones	<ul style="list-style-type: none"> Count to 100 by ones and by tens. 	1 day
Lesson 9.2 Count to 100 by Tens	<ul style="list-style-type: none"> Count to 100 by ones and by tens. 	1 day
Lesson 9.3 Count Forward from a Given Number	<ul style="list-style-type: none"> Count forward beginning from a given number within the known sequence (instead of having to begin at 1). 	1 day




Pacing Guide

	Build Understanding
	Connect Concepts and Skills
	Apply and Practice

Lesson	Mathematics Standards, Grade K	Pacing
Module 10: Compare Numbers to 10		
 Lesson 10.1 Identify a Greater Number of Objects Within 10	<ul style="list-style-type: none"> Understand that each successive number name refers to a quantity that is one larger. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. 	1 day
 Lesson 10.2 Identify a Lesser Number of Objects Within 10	<ul style="list-style-type: none"> Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. 	1 day
 Lesson 10.3 Match Equal Groups of Objects Within 10	<ul style="list-style-type: none"> Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. 	1 day
 Lesson 10.4 Compare Groups Within 10 by Counting	<ul style="list-style-type: none"> Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. 	1 day
 Lesson 10.5 Compare Groups Within 10 by Matching	<ul style="list-style-type: none"> Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. 	1 day
 Lesson 10.6 Compare Numbers Within 10	<ul style="list-style-type: none"> Compare two numbers between 1 and 10 presented as written numerals. 	1 day
Module 11: Add To and Take From Within 10		
 Lesson 11.1 Act Out Addition Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	1 day
 Lesson 11.2 Act Out Subtraction Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	1 day
 Lesson 11.3 Solve Add To Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
 Lesson 11.4 Solve Take From Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days

Lesson	Mathematics Standards, Grade K	Pacing
Lesson 11.5 Write Addition Equations Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 11.6 Write Subtraction Equations Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 11.7 Solve Result Unknown Word Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Module 12: Put Together and Take Apart Within 10		
Lesson 12.1 Represent Addition Problems Within 10 Using Objects and Drawings	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	1 day
Lesson 12.2 Represent Subtraction Problems Within 10 Using Objects and Drawings	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	1 day
Lesson 12.3 Solve Put Together Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Lesson 12.4 Solve Take Apart Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days

Pacing Guide




	Build Understanding
	Connect Concepts and Skills
	Apply and Practice























Lesson	Mathematics Standards, Grade K	Pacing
Module 12: Put Together and Take Apart Within 10		
Lesson 12.5 Solve Word Problems Within 10	<ul style="list-style-type: none"> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. 	2 days
Module 13: Ways to Make Numbers to 10		
Lesson 13.1 Ways to Make 6 and 7	<ul style="list-style-type: none"> Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1 day
Lesson 13.2 Ways to Make 8	<ul style="list-style-type: none"> Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1 day
Lesson 13.3 Ways to Make 9	<ul style="list-style-type: none"> Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1 day
Lesson 13.4 Ways to Make 10	<ul style="list-style-type: none"> Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1 day
Lesson 13.5 Make 10 from a Given Number	<ul style="list-style-type: none"> For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. 	1 day












Lesson	Mathematics Standards, Grade K	Pacing
UNIT 3 GEOMETRY		
Module 14: Analyze and Compare Three-Dimensional Shapes		
Lesson 14.1 Identify and Describe Spheres	<ul style="list-style-type: none"> Correctly name shapes regardless of their orientations or overall size. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). 	1 day
Lesson 14.2 Identify and Describe Cubes	<ul style="list-style-type: none"> Correctly name shapes regardless of their orientations or overall size. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). 	1 day
Lesson 14.3 Identify and Describe Cylinders	<ul style="list-style-type: none"> Correctly name shapes regardless of their orientations or overall size. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). 	1 day
Lesson 14.4 Identify and Describe Cones	<ul style="list-style-type: none"> Correctly name shapes regardless of their orientations or overall size. Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length). 	1 day
Lesson 14.5 Build Shapes	<ul style="list-style-type: none"> Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. 	1 day
Module 15: Describe Positions of Objects		
Lesson 15.1 Use <i>Above</i> and <i>Below</i> to Describe Position	<ul style="list-style-type: none"> Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above</i>, <i>below</i>, <i>beside</i>, <i>in front of</i>, <i>behind</i>, and <i>next to</i>. 	1 day
Lesson 15.2 Use <i>Next To</i> and <i>Beside</i> to Describe Position	<ul style="list-style-type: none"> Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above</i>, <i>below</i>, <i>beside</i>, <i>in front of</i>, <i>behind</i>, and <i>next to</i>. 	1 day


Module continued on next page →

Pacing Guide

	Build Understanding
	Connect Concepts and Skills
	Apply and Practice

Lesson	Mathematics Standards, Grade K	Pacing
Module 15: Describe Positions of Objects		
 Lesson 15.3 Use <i>In Front Of</i> and <i>Behind</i> to Describe Position	 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above</i> , <i>below</i> , <i>beside</i> , <i>in front of</i> , <i>behind</i> , and <i>next to</i> .	1 day
Module 16: Analyze and Compare Two-Dimensional Shapes		
 Lesson 16.1 Identify and Describe Circles	 Correctly name shapes regardless of their orientation or overall size.  Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).  Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	1 day
 Lesson 16.2 Identify and Describe Squares	 Correctly name shapes regardless of their orientation or overall size.  Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).  Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	1 day
 Lesson 16.3 Identify and Describe Triangles	 Correctly name shapes regardless of their orientation or overall size.  Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).  Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	1 day
 Lesson 16.4 Identify and Describe Rectangles	 Correctly name shapes regardless of their orientation or overall size.  Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	1 day
 Lesson 16.5 Identify and Describe Hexagons	 Correctly name shapes regardless of their orientation or overall size.  Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	1 day
 Lesson 16.6 Compose Simple Shapes	 Compose simple shapes to form larger shapes.	1 day

Lesson	Mathematics Standards, Grade K	Pacing
<div>  Lesson 16.7 Compare Two-Dimensional and Three-Dimensional Shapes </div>	<div>  Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").  Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). </div>	1 day
Unit 4 NUMBER AND OPERATIONS IN BASE TEN		
Module 17: Place Value Foundations: Represent Numbers to 20		
<div>  Lesson 17.1 Compose Ten Ones and Some More Ones to 14 </div>	<div>  Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.  Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.  Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. </div>	1 day
<div>  Lesson 17.2 Compose Ten Ones and Some More Ones to 15 </div>	<div>  Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.  Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.  Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. </div>	1 day

Lesson	Mathematics Standards, Grade K	Pacing
Module 17: Place Value Foundations: Represent Numbers to 20		
 Lesson 17.3 Compose Ten Ones and Some More Ones to 19	<ul style="list-style-type: none"> Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. 	1 day
 Lesson 17.4 Represent Numbers to 20	<ul style="list-style-type: none"> Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. 	1 day
Module 18: Place Value Foundations: Represent Numbers to 20 with a Written Numeral		
 Lesson 18.1 Count and Write 11 to 14	<ul style="list-style-type: none"> Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). 	1 day
 Lesson 18.2 Count and Write 15	<ul style="list-style-type: none"> Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). 	1 day

Lesson	Mathematics Standards, Grade K	Pacing
Lesson 18.3 Count and Write 16 to 19	<ul style="list-style-type: none"> Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). 	1 day
Lesson 18.4 Count and Write 20	<ul style="list-style-type: none"> Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. 	1 day
Unit 5 MEASUREMENT		
Module 19: Length and Height		
Lesson 19.1 Describe Attributes of Length and Height	<ul style="list-style-type: none"> Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. 	1 day
Lesson 19.2 Compare and Describe Lengths	<ul style="list-style-type: none"> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. 	1 day
Lesson 19.3 Compare and Describe Heights	<ul style="list-style-type: none"> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. 	1 day
Module 20: Weight		
Lesson 20.1 Describe Attributes of Weight	<ul style="list-style-type: none"> Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. 	1 day
Lesson 20.2 Compare and Describe Weights	<ul style="list-style-type: none"> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. 	1 day
Lesson 20.3 Describe More Than One Attribute of an Object	<ul style="list-style-type: none"> Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. 	1 day

End-of-Year Options

Getting Ready Lessons

A variety of end-of-year options are available for teachers who aim to complete core instruction before a high-stakes assessment is administered. Utilizing standards reports or the recommendations tool, you can find and review content that students did not master or retain. Or, you can use the Getting Ready lessons. These lessons present on-grade-level content that is essential for setting a foundation for success with next year’s content.

Getting Ready For Grade 2

LESSON 1

Algebra • Ways to Expand Numbers

LESSON AT A GLANCE

This lesson builds on place value and prepares children for expanded notation.

Essential Question

How can you write a two-digit number in different ways?

Lesson Objective

Write two-digit numbers in expanded form.

Materials

MathBoard

TEACH AND TALK >

Have children count the first set of base-ten models.

How many tens are there? 8 How many ones? 7

What number does 8 tens stand for? 80

What number does 7 ones stand for? 7

What number is 80 plus 7? 87

Have children complete Exercise 2. Use Turn and Talk to ensure that children understand that the 7 in the number 72 represents 7 tens or 70.

PRACTICE >

Check Understanding

Look at Exercise 1. Explain how you will write the number in different ways. First, I will write how many tens (3) and how many ones (5). Then, I will write 3 tens as 30 and 5 ones as 5, or 30 + 5. I will write the number with the 3 as the tens digit and the 5 as the ones digit, or 35.

Algebra • Ways to Expand Numbers

Essential How can you write a two-digit number in different ways?

There are different ways to think about a number.

8 tens 7 ones

80 + 7

87

8 tens and 7 ones is the same as 80 plus 7.

Turn and Talk Does the 7 in the number 72 show 7 or 70? Explain.

Check Understanding

Write how many tens and ones.

Write the number in two different ways.

3 tens 5 ones

30 + 5

35

5 tens 3 ones

50 + 3

53

GR2 TWO

GR: Practice, p. GRP1

Algebra • Ways to Expand Numbers

Write how many tens and ones.

Write the number in two different ways.

5 tens 8 ones

50 + 8

58

8 tens 4 ones

80 + 4

84

Draw the same number using only tens.

Write how many tens and ones.

Write the number in two different ways.

5 tens 10 ones

50 + 10

60

4 tens 0 ones

40 + 0

40

GR: Reteach, p. GRR1

Algebra • Ways to Expand Numbers

You can write a number different ways.

Count the tens. Count the ones.

4 tens 5 ones

4 tens is the same as 40

5 ones is the same as 5

40 + 5 is the same as 45

Write how many tens and ones.

Write the number in two different ways.

2 tens 6 ones

20 + 6

26

6 tens 3 ones

60 + 3

63

Algebra • Ways to Expand Numbers

Write how many tens and ones.

Write the number in two different ways.

5 tens 8 ones

50 + 8

58

8 tens 4 ones

80 + 4

84

Draw the same number using only tens.

Write how many tens and ones.

Write the number in two different ways.

5 tens 10 ones

50 + 10

60

4 tens 0 ones

40 + 0

40

LESSONS 1-11

Getting Ready Test

PAGE 1

Choose the correct answer.

1 What does the 2 in 352 mean?

2 hundreds

2 tens

2 ones

2 ones

2

There are 17 children at the playground. 2 more children join them. How many children are there now?

17

19

LESSON 1

Getting Ready Checkpoint

Concepts and Skills

Follow the rule to complete each table.

1 Add 3

2 Subtract 7

3 Add 6

4 Subtract 6

10 5

4 7

6 9

8 11

10 3

12 5

13 6

14 7

10 9

9 15

8 14

7 13

15 9

14 8

13 7

12 6

GR23A twenty-three

Algebra • Ways to Expand Numbers

You can write a number different ways.

Count the tens. Count the ones.

4 tens 5 ones

4 tens is the same as 40

5 ones is the same as 5

40 + 5 is the same as 45

Write how many tens and ones.

Write the number two different ways.

2 tens 6 ones

20 + 6

26

6 tens 3 ones

60 + 3

63

Getting Ready for Grade 2

one GRR1

The Getting Ready lessons include teacher support and student assessments.



Standards and Mathematical Practices and Processes

Standards	Student Edition Lessons
Domain COUNTING AND CARDINALITY	
Cluster: Know number names and the count sequence.	
Count to 100 by ones and by tens.	9.1, 9.2
Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	9.3
Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).	2.1, 2.2, 2.3, 2.4, 8.1, 8.2, 8.3, 18.1, 18.2, 18.3, 18.4
Cluster: Count to tell the number of objects.	
Understand the relationship between numbers and quantities; connect counting to cardinality.	
<ul style="list-style-type: none"> When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. 	1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 7.1, 7.2, 7.3, 8.1, 8.2, 8.3, 8.4
<ul style="list-style-type: none"> Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. 	1.5, 2.2, 2.3, 2.4, 8.1, 8.2, 8.3, 13.1, 13.2, 13.3, 13.4, 17.1, 17.2, 17.3, 17.4
<ul style="list-style-type: none"> Understand that each successive number name refers to a quantity that is one larger. 	2.5, 8.4, 10.1
Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	1.1, 1.2, 1.3, 1.4, 7.1, 7.2, 7.3, 17.1, 17.2, 17.3, 17.4, 18.4
Cluster: Compare numbers.	
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	3.1, 3.2, 3.3, 3.4, 3.5, 10.1, 10.2, 10.3, 10.4, 10.5
Compare two numbers between 1 and 10 presented as written numerals.	3.6, 10.6
Domain OPERATIONS AND ALGEBRAIC THINKING	
Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	
Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 12.1, 12.2, 12.3, 12.4, 12.5
Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 12.1, 12.2, 12.3, 12.4, 12.5

Correlations

Standards	Student Edition Lessons
Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).	1.5, 13.1, 13.2, 13.3, 13.4
For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	13.5
Fluently add and subtract within 5.	5.7, 6.7
Domain NUMBER AND OPERATIONS IN BASE TEN	
Cluster: Work with numbers 11–19 to gain foundations for place value.	
Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	17.1, 17.2, 17.3, 17.4, 18.1, 18.2, 18.3
Domain MEASUREMENT AND DATA	
Cluster: Describe and compare measurable attributes.	
Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	19.1, 20.1, 20.3
Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.	19.2, 19.3, 20.2
Cluster: Classify objects and count the number of objects in each category.	
Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	4.1, 4.2, 4.3, 4.4
Domain GEOMETRY	
Cluster: Identify and describe shapes.	
Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above</i> , <i>below</i> , <i>beside</i> , <i>in front of</i> , <i>behind</i> , and <i>next to</i> .	15.1, 15.2, 15.3
Correctly name shapes regardless of their orientations or overall size.	14.1, 14.2, 14.3, 14.4, 16.1, 16.2, 16.3, 16.4, 16.5
Identify shapes as two-dimensional (lying in a plane, “flat”), or three-dimensional (“solid”).	14.1, 14.2, 14.3, 14.4, 16.7
Cluster: Analyze, compare, create, and compose shapes.	
Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).	14.1, 14.2, 14.3, 14.4, 16.1, 16.2, 16.3, 16.4, 16.5, 16.7

Standards	Student Edition Lessons
Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	14.5, 16.1, 16.2, 16.3
Compose simple shapes to form larger shapes.	16.6

Correlations

Mathematical Practices and Processes	Student Edition Lessons
<p>Into Math covers all Mathematical Practice and Process standards as an integral part of instruction and practice. For a summary of how the program features address each Mathematical Practice and Process standard see PG18-PG19. These pages include probing <i>Questions to Ask</i> that support each Mathematical Practice and Process standard.</p>	
<p>Make sense of problems and persevere in solving them.</p> <p>Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.</p>	<p>In every lesson. Some examples include 2.1, 3.4, 4.2, 6.5, 10.5, 14.1, 17.2, 19.2, 20.3</p>
<p>Reason abstractly and quantitatively.</p> <p>Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to <i>decontextualize</i>—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to <i>contextualize</i>, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.</p>	<p>1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 3.4, 3.5, 4.1, 4.2, 4.3, 4.4, 5.1, 5.2, 5.5, 5.6, 5.7, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 7.1, 7.2, 7.3, 8.1, 8.2, 8.3, 8.4, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 11.5, 11.7, 12.2, 12.3, 12.4, 12.5, 13.1, 13.2, 13.3, 13.4, 17.1, 17.2, 17.3, 17.4, 18.1, 18.2, 18.3, 18.4, 19.2, 19.3</p>
<p>Construct viable arguments and critique the reasoning of others.</p> <p>Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.</p>	<p>19.1, 19.2, 19.3, 20.1, 20.2, 20.3</p>

Mathematical Practices and Processes	Student Edition Lessons
<p>Model with mathematics.</p> <p>Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.</p>	<p>5.3, 5.4, 5.5, 5.6, 5.7, 6.4, 6.5, 6.7, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 12.1, 12.5, 13.5</p>
<p>Use appropriate tools strategically.</p> <p>Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.</p>	<p>In every Spark Your Learning, Module Review, and the following lessons: 2.5, 3.1, 3.2, 4.1, 4.2, 4.3, 6.1, 6.2, 6.4, 7.3, 8.4, 11.1, 11.2, 11.3, 11.4, 11.6, 12.2, 12.3, 12.4, 14.5</p>

Correlations

Mathematical Practices and Processes	Student Edition Lessons
<p>Attend to precision.</p> <p>Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.</p>	<p>1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 3.3, 3.4, 3.5, 3.6, 4.4, 6.3, 9.3, 10.1, 10.2, 10.3, 10.5, 11.5, 13.5, 14.1, 14.2, 14.3, 14.4, 14.5, 15.1, 15.2, 15.3, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 17.1, 17.2, 17.3, 17.4, 18.4, 19.1, 19.2, 20.1, 20.2, 20.3</p>
<p>Look for and make use of structure.</p> <p>Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.</p>	<p>1.5, 2.5, 3.3, 9.1, 9.2, 9.3, 13.1, 13.2, 13.3, 13.4, 13.5, 14.4, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 18.1, 18.2, 18.3, 18.4</p>
<p>Look for and express regularity in repeated reasoning.</p> <p>Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.</p>	<p>3.6, 9.2, 12.1, 13.4</p>

Teacher Notes

Notes & Reflections

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Problem Solving Structures

Introducing Students to a Variety of Structures

We all want the same for students, to be independent problem solvers and thinkers. The types of problems we provide and the way we present them can ultimately support or hinder students. Most students are not given the opportunity to truly reason with a variety of word problems. Rather, students are often given problems that closely resemble the first problem below. The problem contains two numbers that you act upon in some way. The answer to the problem is unknown. However, students should be exposed to problems that have the start or the change unknown as well.

Let's consider these two problems:

- Anna has 7 books checked out from the library. She returns 4 books. How many books does Anna still have to return?
- Anna reads 7 books, and Jon reads 4 books. How many more books does Anna read than Jon?

Both problems could be solved using the equation $7 - 4 = \underline{\hspace{1cm}}$. However, as students begin to translate story problems, the context of these problems varies quite a bit. The first can be considered a "take away" problem and the second a "compare" problem. If we always refer to subtraction as "take away," then we are removing the true context of the mathematics that exists in the world around us.

Various problem structures exist for addition, subtraction, multiplication, and division. Students do not need to be able to identify these structures, but it's important that teachers know the variety of structures and expose students to them.



Don't Steal the Struggle

The context within word problems helps to support mathematical thinking. Many teachers may shy away from problem solving, seeing it as more complex than a "numbers only" problem. However, students do not need to master the skill of computation in order to solve problems. In fact, the context used in problem solving can often help students make sense of the numbers, making the students more successful.

When introducing a word problem, don't be tempted to model a similar problem first and then give students a problem that simply contains different numbers. This results in stealing the students' struggle and takes away the opportunity for thinking and reasoning. Moreover, students should be encouraged to solve problems using whatever strategy or technique that they wish. It is also important to note that teachers should not teach "key words" to students as a system of support for students. Students are often told that words like "altogether" and "in all" are supposed to signal to students that they are to add, while words like "how many more" mean they are to subtract. However, key words can lead students to choose the wrong operation. Teaching key words takes away the thinking and sends the message that there is no reasoning necessary—that math is just about numbers and is not even a part of our real life. What is most important is their reasoning and why they chose to solve it in the way they did. The strategies used by students provide teachers with a great deal of information about where a student is and where to go next with him or her.

Addition and Subtraction Problem Situations—Add To/Take From



Add To/Take From problems have three components. There is an initial quantity—the **start**. The **change** is the action upon that initial quantity. The outcome of the action upon the initial quantity is the **result**.

	RESULT UNKNOWN	INTO MATH EXAMPLES
ADD TO	A problem in which the start and change (what is <i>added to</i> the start) are given in the problem. The result (the outcome of performing the action) of the change is not known and is what the students determine.	<div> Two birds are sitting on a branch. One more bird flies in to join them. How many birds are sitting on the branch now?</div> <div>$2 + 1 = \square$</div> <div>Example from Lesson 5.3, Problem 3 • Additional Lessons 5.1, 5.7, 11.1</div>
TAKE FROM	A problem in which the start and change (what is <i>taken from</i> the start) are given in the problem. The result (the outcome of performing the action) of the change is not known and is what the students determine.	<div> Two kittens are playing in some leaves. One kitten goes to sleep. How many kittens are still playing in the leaves?</div> <div>$2 - 1 = \square$</div> <div>Example from Lesson 5.4, Problem 3 • Additional Lessons 5.7, 11.2, 11.7</div>

Problem Types



Addition and Subtraction Problem Situations—Add To/Take From

Add To/Take From problems have three components. There is an initial quantity—the **start**. The **change** is the action upon that initial quantity. The outcome of the action upon the initial quantity is the **result**.

	CHANGE UNKNOWN	INTO MATH EXAMPLES
ADD TO	A problem in which the start and result (the outcome of the performing action) are given in the problem. The change (what is added to the start) is not known and is what the students determine.	<div> There are two lions. Then some lions join them. There are four lions now. How many lions joined them?</div> <div>$2 + \square = 4$</div> <div>Example from Lesson 5.5, Problem 7 • Additional Lesson 5.5</div>
TAKE FROM	A problem in which the start and result (the outcome of the performing action) are given in the problem. The change (what is taken from the start) is not known and is what the students determine.	<div> Three horses are grazing in a field. Some horses leave. One horse is grazing now. How many horses leave?</div> <div>$3 - \square = 1$</div> <div>Example from Lesson 5.6, Problem 7 • Additional Lesson 5.6</div>

Addition and Subtraction Problem Situations—Put Together/Take Apart

In a *Put Together/Take Apart* problem, both quantities are already present. Unlike an *Add To/Take From* problem, these problems do not involve a change in the situation. The **total** is unknown or one or both of the **quantities** (or **groups**) are unknown.

	TOTAL UNKNOWN	INTO MATH EXAMPLES
PUT TOGETHER/ TAKE APART	A problem in which the two groups/quantities are known. The total is not known and is what the students determine.	<div> There are seven orange flowers and three yellow flowers in the field. How many total flowers are there?</div> <div>$7 + 3 = \square$</div> <div>Example from Lesson 12.1, Problem 5 • Additional Lessons 6.3, 6.7, 12.3</div>
	ADDEND UNKNOWN	INTO MATH EXAMPLES
	A problem in which one of the two groups/quantity is known and the total is also known. The other group/quantity is not known and is what the students determine.	<div> There are four toys on the floor. Two are toy cars and the rest are toy planes. How many toys are planes?</div> <div>$4 - \square = 2$</div> <div>Example from Lesson 6.4, Problem 7 • Additional Lessons 12.2, 12.4, 12.5</div>

Teacher Notes

Notes & Reflections

This image shows a full page of blank handwriting practice paper. It features 20 evenly spaced, horizontal blue lines running across the entire width of the page. The lines are thin and consistent in color, providing a guide for letter height and placement. There are no margins, text, or other markings on the paper.

Notes & Reflections

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Differentiated Support Using *Do The Math*

Do The Math can be implemented with *Into Math* core instruction during the Differentiated Options block or as a separate instruction block. Depending on student level, *Do The Math* instruction can be provided as Tier 1, 2, or 3 support.



Do The Math as Tier 1 Support *Do The Math* Addition & Subtraction modules provide Tier 1 supports for the following **Kindergarten** skills as shown in the table below.

Kindergarten Skills	Addition & Subtraction Modules			
	Number Core	A	B	C
Understand addition as joining.	X			
Represent addition with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	X	X		
Record each composition for a number from 11 to 19 from ones by a drawing or equation (e.g., $18 = 10 + 8$).	X			
For any number from 1 to 9, find the number that makes 10 when added to the given number.	X	X		
Fluently add within 5.	X			
Compose numbers from 11 to 19 from ten ones and some further ones.	X	X		
Understand that 10 ones is 1 ten.	X	X		
Add within 10.	X	X		
Solve addition word problems within 10.	X	X		
Understand subtraction as taking away.	X			
Represent subtraction with objects, fingers, mental image, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	X			
Fluently subtract within 5.	X			
Subtract within 10.	X			
Solve subtraction word problems with 10.	X			

More information on implementation models, Tiered recommendations, and additional lessons that connect to core content are provided in the *Do The Math* Core Connections Guide, included in the *Do The Math* Teacher Bookcase.

Manipulatives and Tools

Into Math provides opportunities for students to choose manipulatives and tools to help them make sense of mathematics and connect to mathematical representations. Giving students the opportunity to choose a manipulative or tool for a task provides a teacher insight into students' understanding of connections they are making with prior learning.

The tables below will help you plan which manipulatives and tools to have available for students during lesson instruction.

● Manipulative Kit ● Basic Manipulative Kit ● Teacher Resource Masters

Module	Manipulatives and Tools by Lesson
Module 1: Represent Numbers to 5 with Objects	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 1.1–1.5 ● ● two-color counters Lessons 1.1–1.5
Module 2: Represent Numbers to 5 with a Written Numeral	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 2.1–2.3, 2.5 ● ● two-color counters Lessons 2.1–2.3, 2.5
Module 3: Matching and Counting Numbers to 5	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 3.1–3.6 ● ● two-color counters Lessons 3.1–3.6
Module 4: Classify, Count, and Sort Objects	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 4.1, 4.2, and 4.4 ● ● plane shapes Lessons 4.2 and 4.4 ● ● two-color counters Lessons 4.1 and 4.3
Module 5: Add To and Take From Within 5	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 5.1, 5.3–5.7 ● ● two-color counters Lessons 5.1–5.7
Module 6: Put Together and Take Apart Within 5	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 6.1–6.6 ● Dominoes Lesson 6.5–6.6 ● Dot Cards Lessons 6.5–6.6 ● Dot Plates Lessons 6.5–6.6 ● ● two-color counters Lessons 6.1–6.6
Module 7: Represent Numbers 6 to 10 with Objects	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 7.1–7.3 ● Ten Frames Lessons 7.1–7.3 ● ● two-color counters Lessons 7.1–7.3
Module 8: Represent Numbers 6 to 10 with a Written Numeral	<ul style="list-style-type: none"> ● ● connecting cubes Lesson 8.4 ● ● pattern blocks Lesson 8.3 ● ● two-color counters Lessons 8.1–8.4

Manipulatives and Tools

● Manipulative Kit ● Basic Manipulative Kit ● Teacher Resource Masters

Module	Manipulatives and Tools by Lesson
Module 9: Use the Count Sequence to Count to 100	<ul style="list-style-type: none"> ● Corn Maze Puzzle Lesson 9.1 ● Count by Tens Puzzle Lesson 9.2
Module 10: Compare Numbers to 10	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 10.1–10.5 ● ● two-color counters Lessons 10.1–10.5
Module 11: Add To and Take From Within 10	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 11.1–11.6 ● ● two-color counters Lessons 11.1–11.6
Module 12: Put Together and Take Apart Within 10	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 12.1–12.4 ● ● two-color counters Lessons 12.1–12.4
Module 13: Ways to Make Numbers to 10	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 13.1–13.5 ● ● two-color counters Lessons 13.1–13.5
Module 14: Analyze and Compare Three-Dimensional Shapes	<ul style="list-style-type: none"> ● Cone Pattern Lesson 14.4 ● Cube Pattern Lesson 14.2 ● Cylinder Pattern Lesson 14.3 ● solid shapes Lessons 14.1–14.5
Module 15: Describe Positions of Objects	<ul style="list-style-type: none"> ● solid shapes Lessons 15.1–15.3
Module 16: Analyze and Compare Two-Dimensional Shapes	<ul style="list-style-type: none"> ● Pattern Blocks Lesson 16.6 ● ● plane shapes Lessons 16.1, 16.2, and 16.7 ● Semantic Map Lesson 16.1
Module 17: Place Value Foundations: Represent Numbers to 20	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 17.1–17.4 ● ● two-color counters Lessons 17.1–17.3
Module 18: Place Value Foundations: Represent Numbers to 20 with a Written Numeral	<ul style="list-style-type: none"> ● ● connecting cubes Lessons 18.1–18.4 ● Ten Frames Lessons 18.1–18.4 ● ● two-color counters Lessons 18.1–18.4

Unit 1 Performance Assessment

Count on It

Task Summary The Unit 1 Performance Assessment will have students:

- Write numbers from 0 to 5 and count objects in successive order.
- Represent a number of objects with a written numeral from 0 to 5.
- Solve addition and subtraction word problems.
- Understand that each successive number refers to one larger.
- Compare two numbers between 1 and 5.
- Classify objects into given categories.

Unit 1
Performance Task

Name

Count on It

1

3

1

5

0

4

2

Check children's tracings and drawings.

Directions:

1. Trace each number. Draw balloons to show that number. Circle the number that is 1 greater than 4.

Kindergarten • Unit 1 • Performance Task

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Unit 1
Performance Task

Name

2

R

B

R

B

R

3

2

Blue

+

3

Red

=

5

4

3

-

2

=

1

Directions:

2. Color the squares red. Color the circles blue. 3. How many squares and circles are there in all? Write the number sentence. 4. How many more squares are there than circles? Write a number sentence.

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If students encounter difficulties in completing any of the tasks, use the information below to aid in interpreting student performance and to identify suggestions for follow-up and intervention.

Item	Content Focus	DOK	Intervene with
1	Write numerals from 0 to 20. Represent a number of objects with a written numeral 0–20.	1	Reteach 2.1 Reteach 2.2 Reteach 2.4
2	Classify objects into given categories.	1	Reteach 4.2
3	Represent addition with equations.	2	Reteach 5.5
4	Represent subtraction with equations.	2	Reteach 5.6

Additional teacher support and a scoring rubric can be found in your Assessment Guide.

Unit 2 Performance Assessment

Ella's Collage

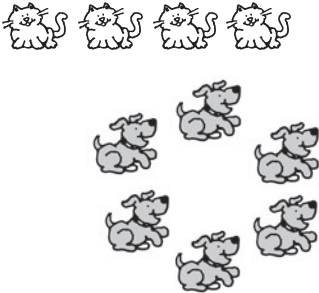
Task Summary The Unit 2 Performance Assessment will have students:

- Write numbers from 0 to 10.
- Count to answer “how many?” questions about as many as 10 things arranged in a rectangular array or a circle.
- Identify whether the number of objects in one group is greater than the number of objects in another group.
- Represent addition with equations and solve addition word problems.

Unit 2
Performance Task

Name _____

Ella's Collage



1

Possible answer:

4

+

6

=

10

2

Possible answer:

3

+

7

=

10

Directions:
Ella puts pictures of cats and dogs in a collage. Look at the collage.
1. How many cats and dogs does Ella's collage have in all? Write an equation. 2. What other combination of cat and dog pictures can Ella use to make a collage with the same number of pictures in all? Write an equation.

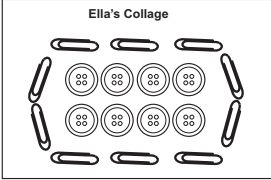
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Unit 2
Performance Task

Name _____

3

Ella's Collage



4

8

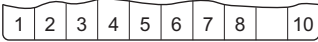
+

10

=

18

5



Directions:
Ella makes a collage out of buttons and paper clips.
3. How many buttons did Ella use? Write the number. How many paper clips did Ella use? Write the number.
4. Does Ella use more buttons or paper clips? Circle the object that she uses more.
5. Ella is making a chart showing numbers from 1 to 10. Write the number that is missing.

Kindergarten • Unit 2 • Performance Task

129

If students encounter difficulties in completing any of the tasks, use the information below to aid in interpreting student performance and to identify suggestions for follow-up and intervention.

Item	Content Focus	DOK	Intervene with
1	Solve addition word problems within 10.	2	Reteach 6.3
2	Add within 10 to solve problems with both addends unknown.	2	Reteach 13.2 Reteach 13.3 Reteach 13.4
3	Count to answer “how many?” questions about as many as 20 things.	2	Reteach 7.4
4	Compare two numbers between 1 and 10 presented as written numerals.	2	Reteach 10.6
5	Count to 100 by ones.	1	Reteach 9.1

Additional teacher support and a scoring rubric can be found in your Assessment Guide.

Unit 3 Performance Assessment

Shape Safari


Task Summary The Unit 3 Performance Assessment will have students:

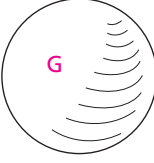
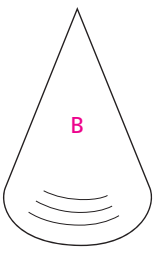
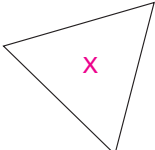
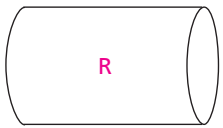
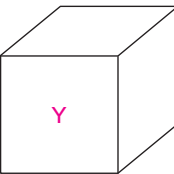
- Describe objects in the environment using names of shapes, and describe the relative positions of these objects.
- Correctly name shapes regardless of their orientations or overall size.
- Analyze and compare two- and three-dimensional shapes.
- Compose simple shapes to form larger shapes.

Unit 3 Performance Task

Name _____

Shape Safari





Directions:
Neymar is going on a Shape Safari. Help Neymar identify the shapes.

1. Color the cone blue. Color the cube yellow. Color the sphere green. Color the cylinder red.
Put an X on the shapes that do not have a curved surface.

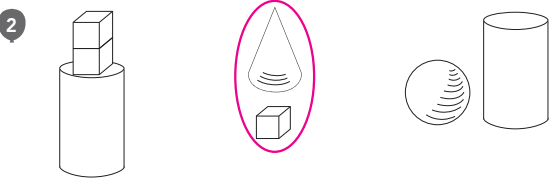
Kindergarten • Unit 3 • Performance Task

133

Unit 3 Performance Task

Name _____

2



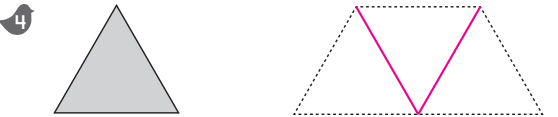
3

Check students' drawings.

4 Sides

4 Vertices

4



Directions:
Neymar moves on to the next part of the Shape Safari. To complete the Safari, help Neymar:

2. Circle the set that shows a cone above a cube. 3. Draw a square. Tell how many sides and vertices it has.
4. Use the pattern block to form the larger shape. Color the blocks to show how you made the larger shape.

134

If students encounter difficulties in completing any of the tasks, use the information below to aid in interpreting student performance and to identify suggestions for follow-up and intervention.

Item	Content Focus	DOK	Intervene with
1	Correctly name shapes regardless of their orientation or overall size.	1	Reteach 14.1
2	Describe the relative positions of shapes.	2	Reteach 15.1
3	Analyze and compare two-dimensional shapes.	2	Reteach 16.1 Reteach 16.3
4	Compose simple shapes to form larger shapes.	2	Reteach 16.6

Additional teacher support and a scoring rubric can be found in your Assessment Guide.

Unit 4 Performance Assessment

Buttons and Flowers

Task Summary The Unit 4 Performance Assessment will have students:

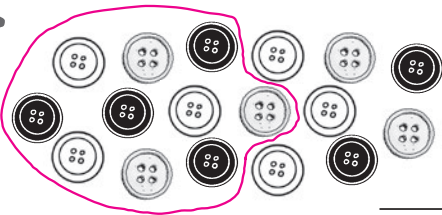
- Write numbers from 0 to 20.
- Represent a number of objects with a written numeral.
- Compose and decompose numbers from 11 to 19 into ten ones and some further ones.
- Understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Unit 4 Performance Task

Name

Buttons and Flowers

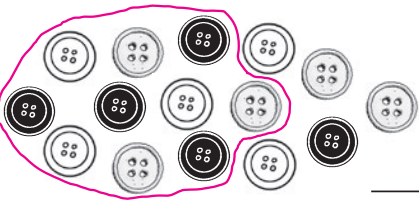
1



Possible grouping of ten is shown.

17

2



Possible grouping of ten is shown.

15

Directions:

Yoshi and Neela collect buttons.

1–2. For each set, circle 10 buttons, count how many in all, and write the number.

138

Unit 4 Performance Task

Name

3

Possible answer:

14

4

○	○	○	○	○
○	○	○	○	○
○	○	○	○	

Possible answer. Check children's drawings.

5

10 + 4 = 14

Directions:

3. Yoshi and Neela are picking flowers. They pick more than 10 flowers but no more than 19 flowers. Write a number that could be the number of flowers they pick. 4. Place counters in the ten frames to show that number. Draw the counters. 5. Complete the number sentence to show how to make that number.

Kindergarten • Unit 4 • Performance Task

139

If students encounter difficulties in completing any of the tasks, use the information below to aid in interpreting student performance and to identify suggestions for follow-up and intervention.

Item	Content Focus	DOK	Intervene with
1	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20.	1	Reteach 18.3 Reteach 18.4
2	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20.	1	Reteach 18.3 Reteach 18.4
3	Represent a number of objects with a written numeral 0–20.	2	Reteach 18.1
4	Compose and decompose 11 to 19 into ten ones and some further ones.	2	Reteach 17.3
5	Compose and decompose 11 to 19 into ten ones and some further ones.	2	Reteach 17.4

Additional teacher support and a scoring rubric can be found in your Assessment Guide.

Unit 5 Performance Assessment

Weight, Length, and Height

Task Summary The Unit 5 Performance Assessment will have students:


- Describe measurable attributes of objects, such as length or weight.
- Directly compare two objects with a measurable attribute in common to see which object has “more of”/“less of” the attribute.
- Describe the difference between two objects in regard to a measurable attribute.

Unit 5
Performance Task

Name _____

Weight, Length, and Height

1



Answers will vary.
Check children's answers.

lighter

heavier

Directions:


1. Hold the classroom object pictured above in your hand. Find an object in the classroom that is heavier. Draw the object. Draw a picture of a classroom object that is lighter. Draw lines to match the words to the objects you drew.

Kindergarten • Unit 5 • Performance Task143

Unit 5
Performance Task

Name _____

2




Answers will vary.
Check children's answers.

longer

shorter

3



Answers will vary.
Check children's answers.

taller

shorter

Directions:

2. Draw a pencil that is shorter or longer than the crayon. Circle the word that matches the object you drew.
3. Draw a plant that is taller or shorter than the first plant. Circle the word that matches the plant you drew.

144

If students encounter difficulties in completing any of the tasks, use the information below to aid in interpreting student performance and to identify suggestions for follow-up and intervention.

Item	Content Focus	DOK	Intervene with
1	Directly compare two objects with a measurable attribute in common, to see which object has “more of” the attribute, and describe the difference.	2	Reteach 20.2
2	Directly compare two objects with a measurable attribute in common, to see which object has “more of” the attribute, and describe the difference.	2	Reteach 19.2
3	Directly compare two objects with a measurable attribute in common, to see which object has “more of” the attribute, and describe the difference.	2	Reteach 19.3

Additional teacher support and a scoring rubric can be found in your Assessment Guide.

Planning and Pacing Guide

PG81

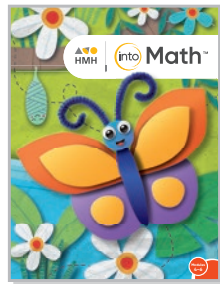
Into Math Solutions and Components

Core Materials

Student Materials

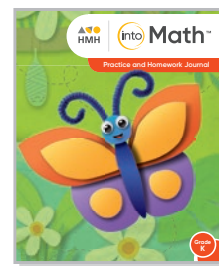
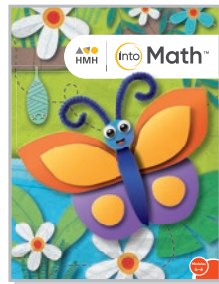
ONLINE

- Access all program materials
- Complete and submit assignments and assessments
- Assign Interactive Practice with Hints, Corrective Feedback, and Try Again support
- Track progress



Student Edition*

Multi-volume: write-in, consumable



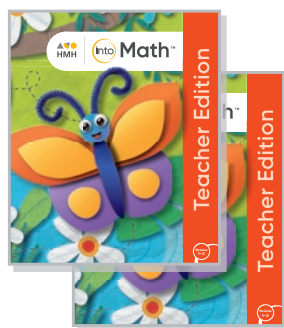
Practice and Homework Journal*

One volume: write-in, consumable

Teacher Materials

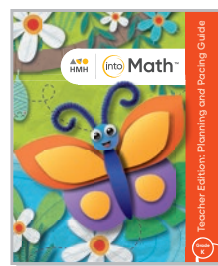
ONLINE

- Access all program materials
- Plan lessons
- Assign materials
- View reports
- Group students and get recommendations
- Access immediate scores / item analysis
- Access reports on standards and skills



Teacher Edition

Conveniently sized for at-home planning



Planning and Pacing Guide

Correlations, resources, and pacing



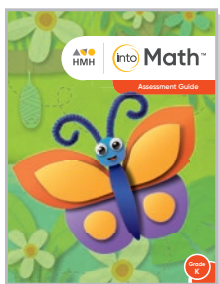
Module Support Videos

Classroom videos featuring learning tasks, Language Routines, Talk Moves, and differentiation

Assessments

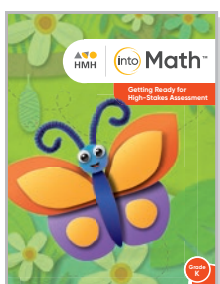
ONLINE

- Access and assign Math Growth Measure interim assessment
- Access and assign digital assessments and reports



Assessment Guide*

Secure assessment masters for teachers, including Form A and Form B for every module



Getting Ready for High Stakes Assessment*

High Stakes Assessment readiness practice for every Math Standard, with three half-length Practice Tests



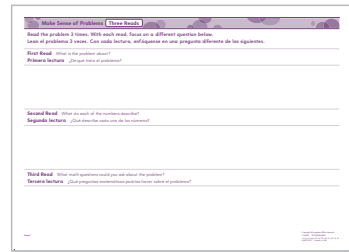
Differentiation and Support Materials



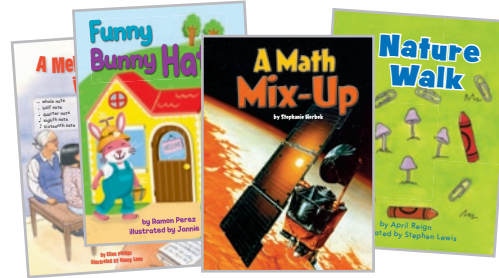
Digital and interactive versions of resources are available on Ed: Your Friend in Learning.

ONLINE

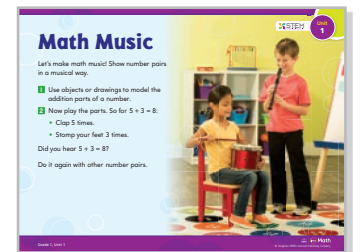
- Math Center Activities
- Fluency Checks
- Digital Readers
- Poggles Digital Game
- Multilingual Glossary
- Digital Toolbox
- Math on the Spot tutorial videos
- School Home Letters



MathBoard
Write-on / wipe-off



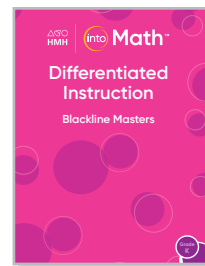
Readers
With Lexile® scores



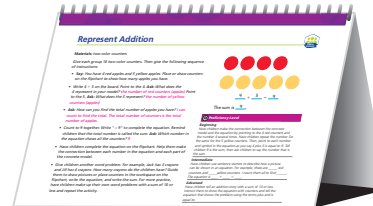
Unit Project Cards
Featuring STEM and careers

ONLINE

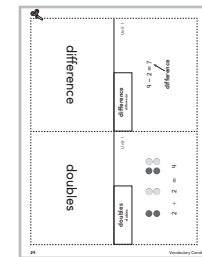
- Math Center Activities
- Interactive Reteach, Challenge, Additional Practice, and Rtl
- Interactive Fluency Checks
- Digital Readers
- Poggles Digital Game
- Getting Ready for High Stakes Assessment Checks
- MTSS/Rtl Tier 2 and Tier 3 Materials



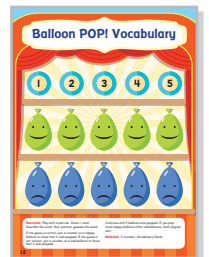
Differentiated Instruction*
Reteach, Challenge, Additional Practice, Fluency



Tabletop Flipchart
Mini-lessons for reteaching to targeted small groups



Vocabulary Cards and Games*
Meaningful and fun activities



Classroom Manipulatives Kit
Hands-on materials

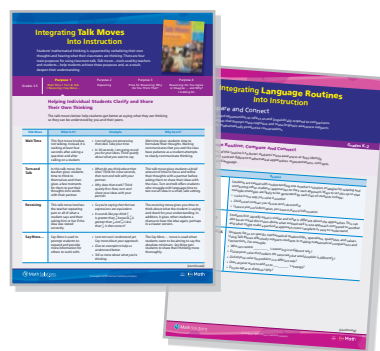


Differentiated Centers
Math Center organizers

Professional Learning and Implementation Support

ONLINE

- Getting Started Module
- Professional Learning Guide provided during implementation training



Professional Learning Cards
Feature Talk Moves and Language Routines



Getting Started Module and Professional Learning Guide
Implementation support

Academic Notebooks and Math Journals

Into Math has a variety of options to help students summarize learning. The Practice and Homework Journal includes several page types that students can add to Academic Notebooks or Math Journals.

Interactive Glossary

As you learn about each new term, add notes, drawings, or sentences in the space next to the definition. Doing so will help you remember what each term means.

A

Possible summaries:
My Vocabulary Summary

add

sumar

Add to find how many altogether.

3 + 2 = 5

2 + 2 = 4

addend

sumando

1 + 3 = 4

2 + 3 = 5

B

bar graph

gráfica de barras

Flowers in the Garden

flowers

0 1 2 3 4 5 6 7

Sports We Like

soccer

baseball

football

0 1 2 3 4 5 6 7 8 9 10

Interactive Glossary

C

Possible summaries:
My Vocabulary Summary

cent (¢)

centavo

A penny has a value of 1 cent (1¢).

1¢

1 cent is the value of a penny.

circle

círculo

cone

cono

has a curved surface and a flat surface

count back

contar hacia atrás

8 - 1 = 7
Start at 8.
Count back 1.
You are on 7.

Count back 2.

7 - 2 = 5

Students should add to their Interactive Glossary throughout the year as they develop understanding for each term. See the complete Interactive Glossary on pp. PG106–PG117.

Interactive Standards		
	Student Edition Lessons	My Progress
Cluster: Understand and apply properties of operations and the relationship between addition and subtraction.	Apply properties of operations as strategies to add and subtract.	3.1, 3.2, 3.3, 3.4, 3.5
	Understand subtraction as an unknown-addend problem.	2.4, 4.1
Cluster: Add and subtract within 20.	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	1.2, 2.2, 2.3
	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).	1.3, 1.4, 1.5, 1.6, 1.7, 2.4, 2.5, 2.6, 3.7, 4.1, 4.2, 4.3, 4.4, 4.7, 13.5
Cluster: Work with addition and subtraction equations.		
	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.	3.6, 11.3
	Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.	2.4, 4.1, 4.5, 4.6

Use the Interactive Standards Chart to record mastery of each standard.

Students can use the My Learning Summary pages to create their own Anchor Charts.

Name

Module 1
Addition Strategies

My Learning Summary

Module 1 Learning Summary

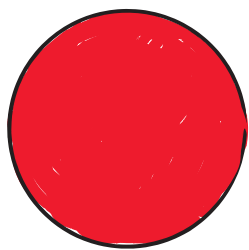
39

Anchor Charts can be developed throughout a module and placed on the classroom wall.

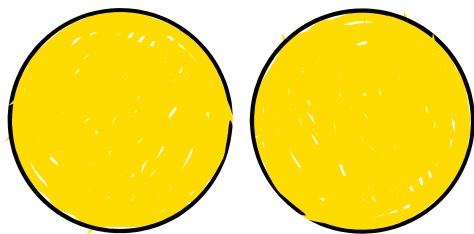
PG84

Planning and Pacing Guide

Represent 1 and 2

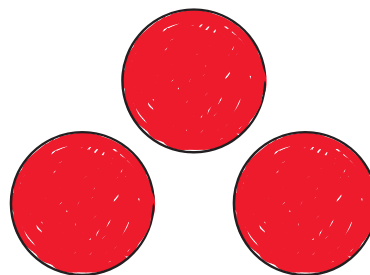


1

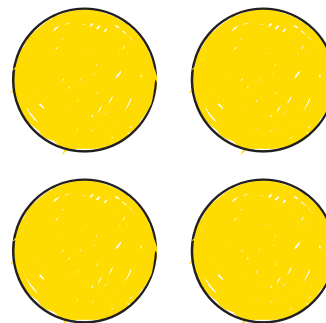


2

Represent 3 and 4

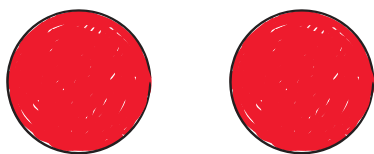


3



4

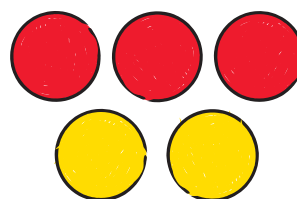
Represent 0



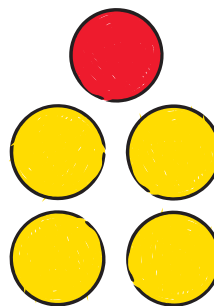
2

0

Ways to Make 5



3 and 2



1 and 4

Count and Write 0 to 5

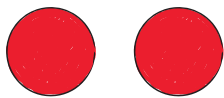
0

zero



1

one



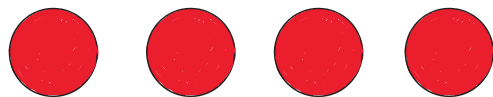
2

two



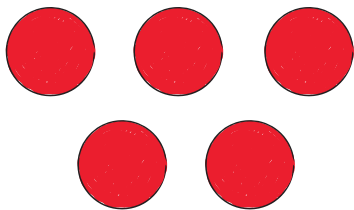
3

three



4

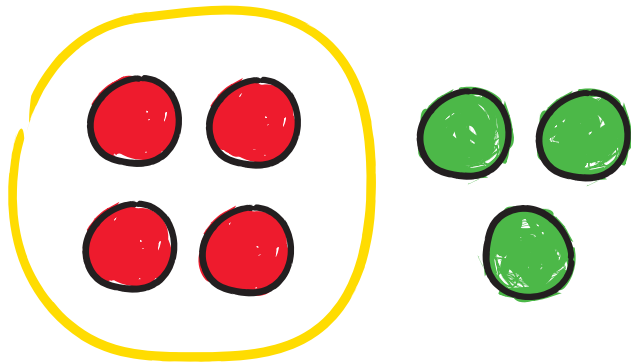
four



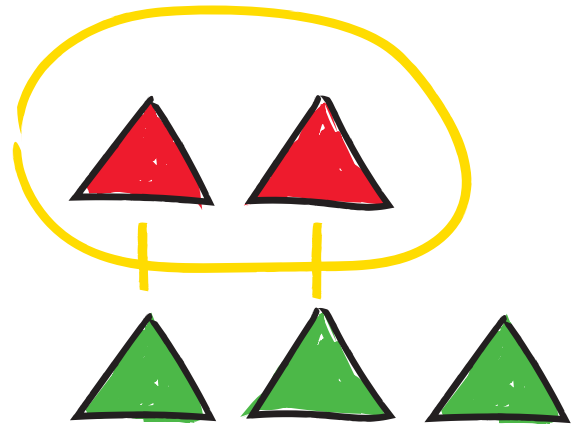
5

five

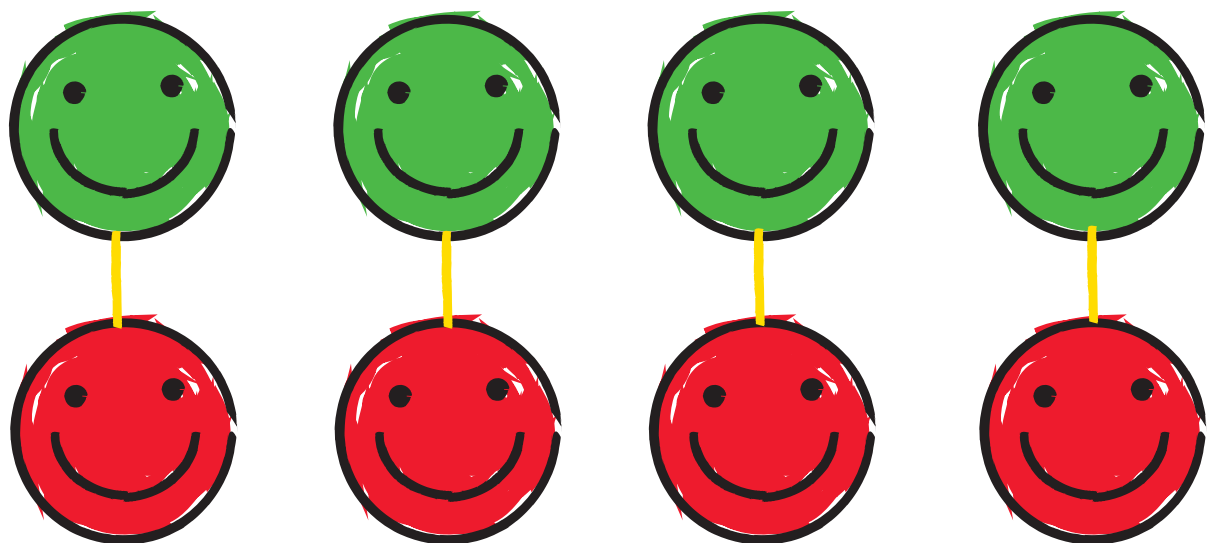
Greater than



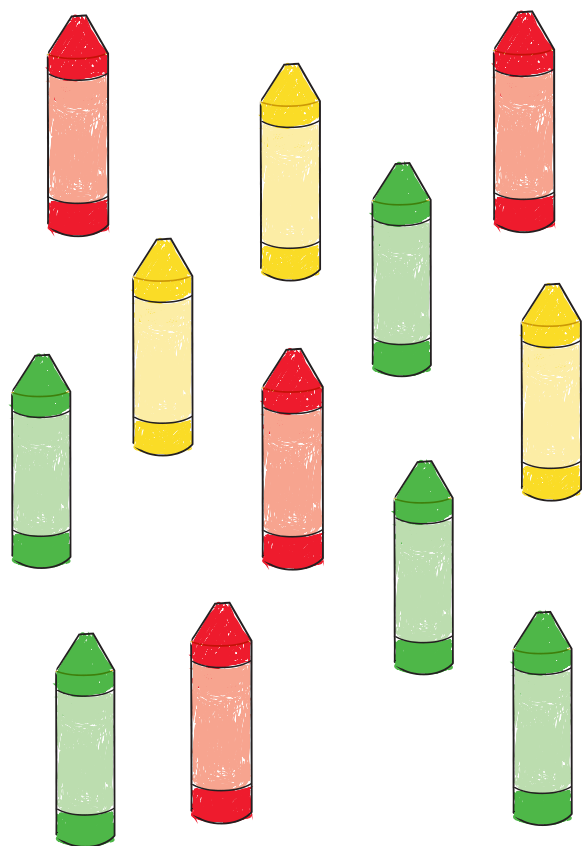
Less than



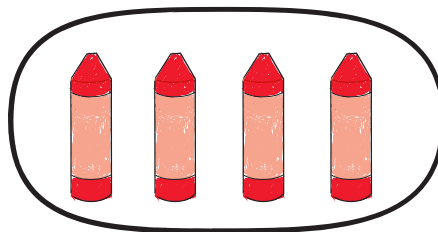
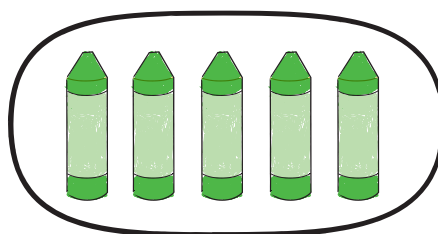
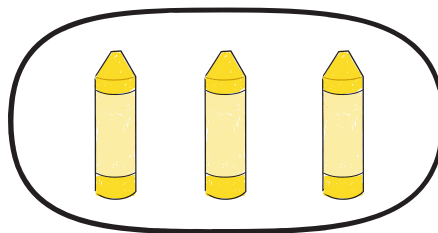
Equal to



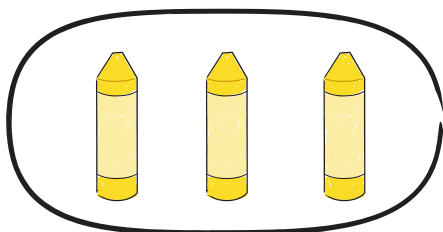
Classify and Count by Color



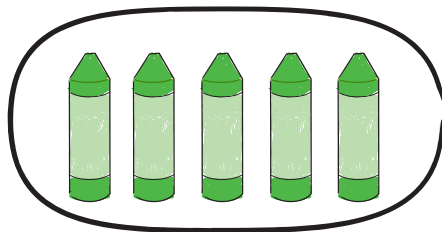
Classify



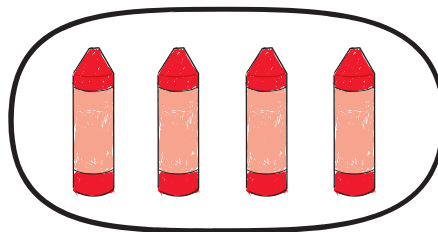
Count



3



5

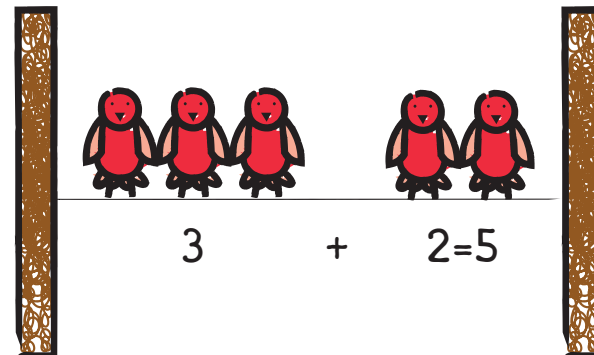


4

Add



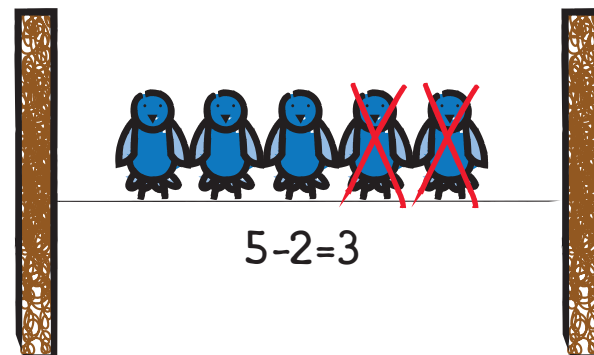
When we add, we join together



Subtract



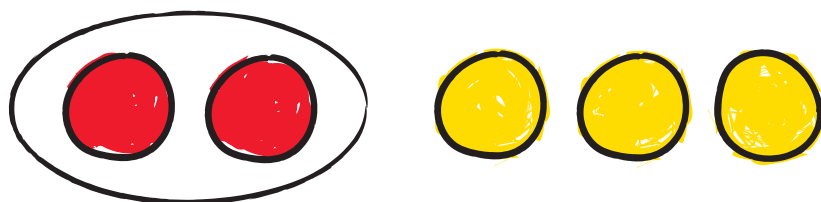
When we subtract, we take from.



Solve Put Together and Take Apart Word Problems

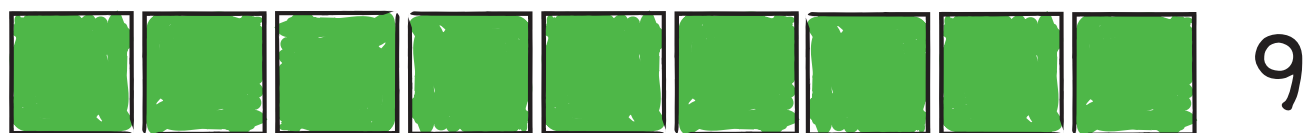


$$2 + 3 = 5$$

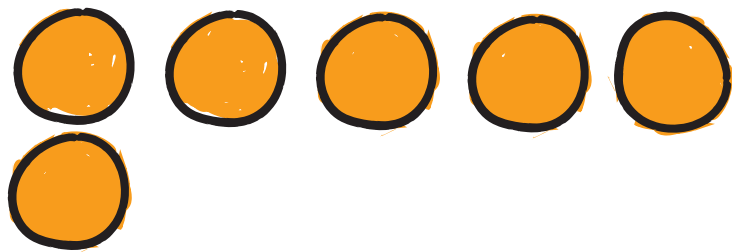


$$5 - 2 = 3$$

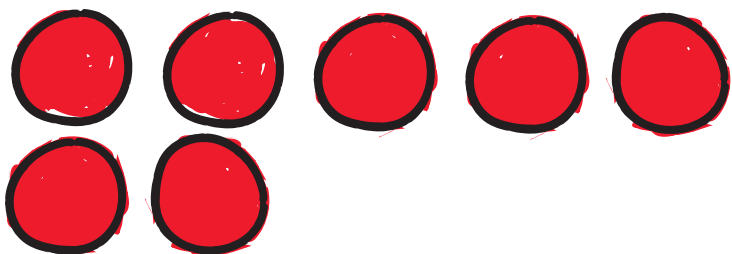
Represent 6 to 10



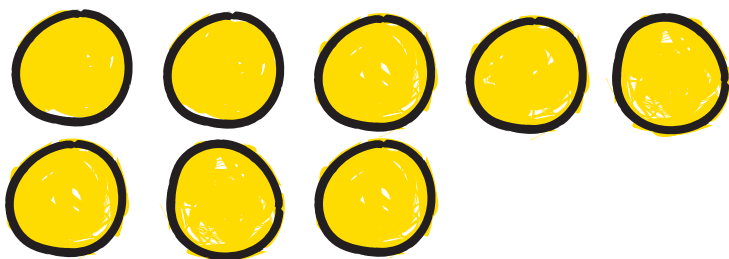
Count and Write 6, 7, 8, 9, and 10



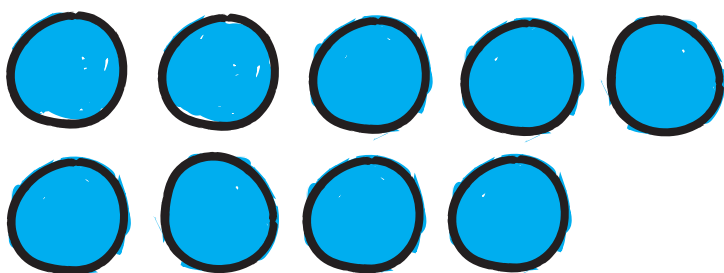
6 six



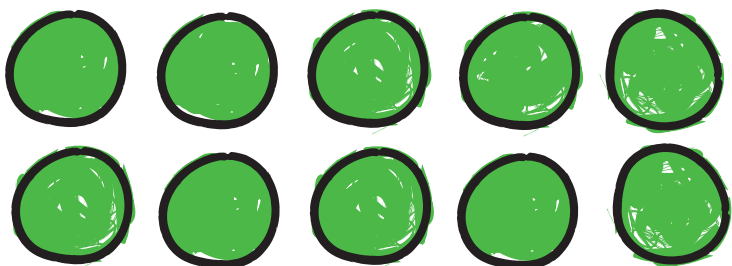
7 seven



8 eight



9 nine



10 ten

Count to 100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Possible examples of ways to count to 100:



Count by ones

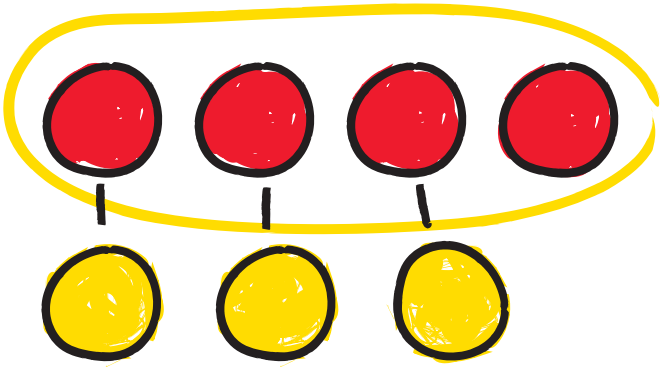


Count by tens

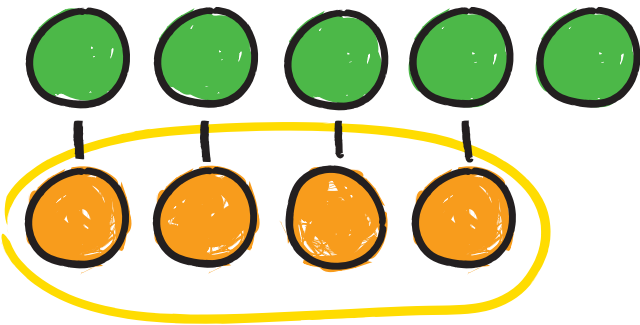


Count by ones, starting with a number other than 1

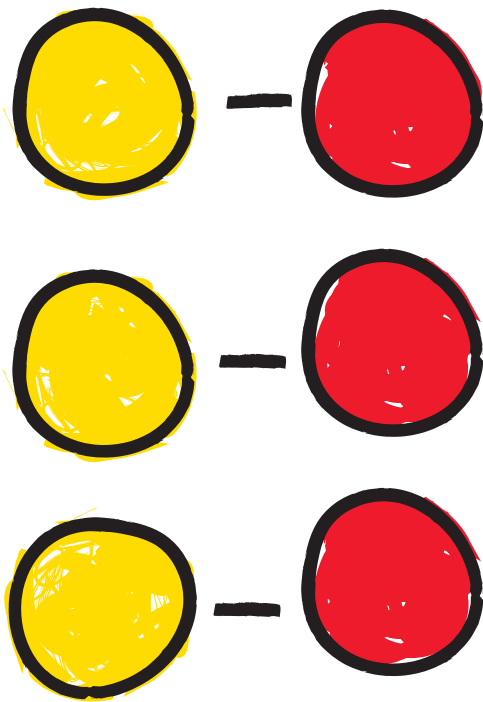
Greater than



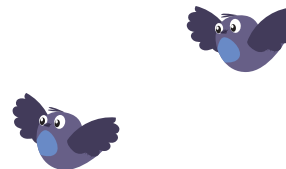
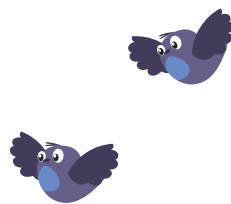
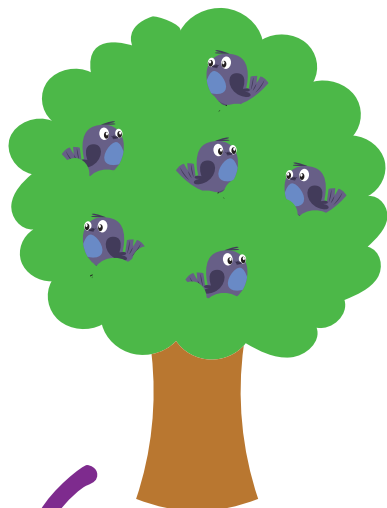
Less than



Equal



Solve Addition Problems Within 10



$$6 + 4 = 10$$

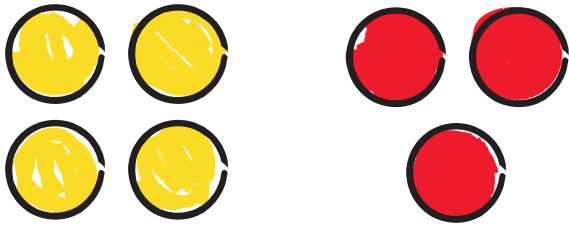
Solve Subtraction Problems Within 10



$$10 - 3 = 7$$

Put Together and Take Apart

Add



$$4 + 3 = 7$$

plus

Put together

Subtract



$$6 - 2 = 4$$

minus

Take apart

Ways to Make 6



$$6 = 1 + 5$$



$$6 = 2 + 4$$



$$6 = 3 + 3$$

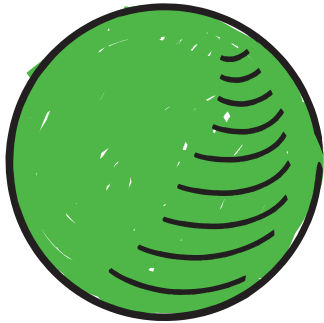


$$6 = 4 + 2$$



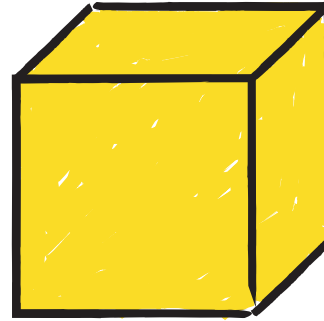
$$6 = 5 + 1$$

Spheres



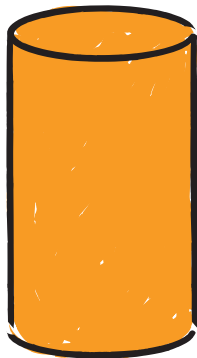
solid
round
curved surfaces
three-dimensional

Cubes



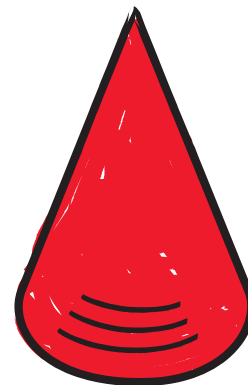
solid
6 flat surfaces
three-dimensional

Cylinders



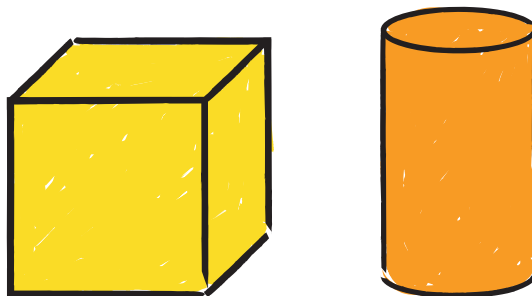
solid
1 curved surface
2 flat surfaces
three-dimensional

Cones



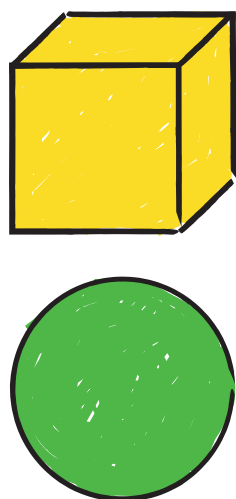
solid
1 curved surface
1 flat surface
three-dimensional

Use Above and Below, Next To and Beside, and In Front Of and Behind



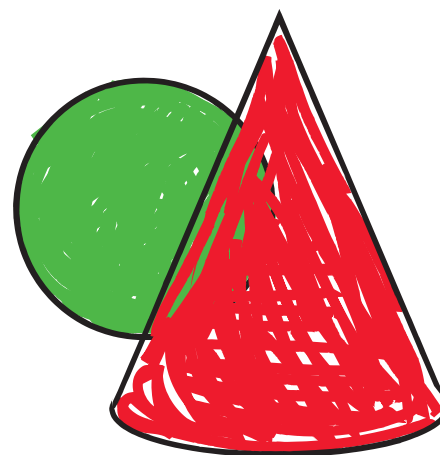
The cube is **beside** the cylinder.
The cylinder is **next to** the cube.

The cube is **above**
the sphere.



The sphere is **below**
the cube.

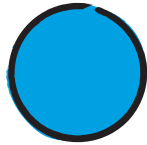
The sphere is **behind**
the cone.



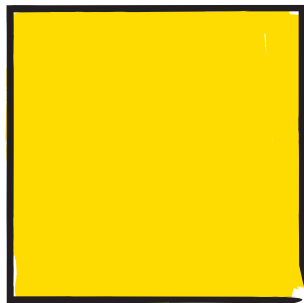
The cone is **in front of**
the sphere.



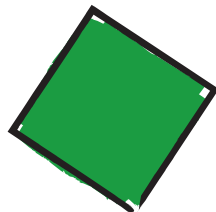
Circles



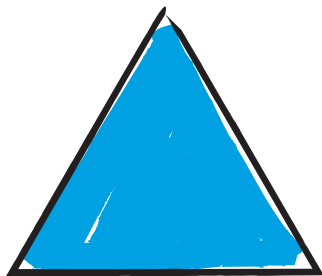
flat, curved



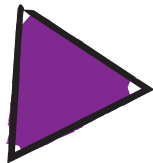
Squares



four sides,
four corners



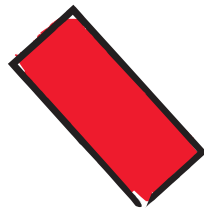
Triangles



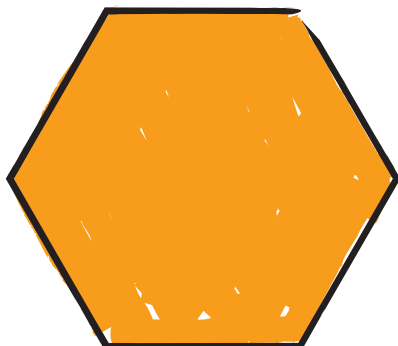
three sides,
three corners



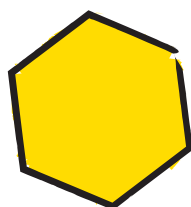
Rectangles



four sides,
four corners



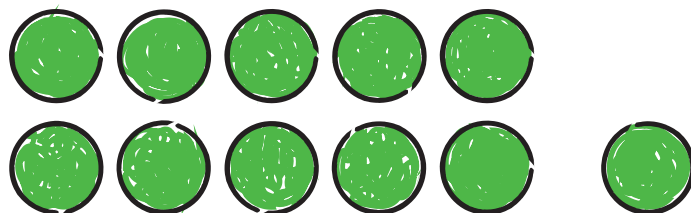
Hexagons



six sides,
six corners

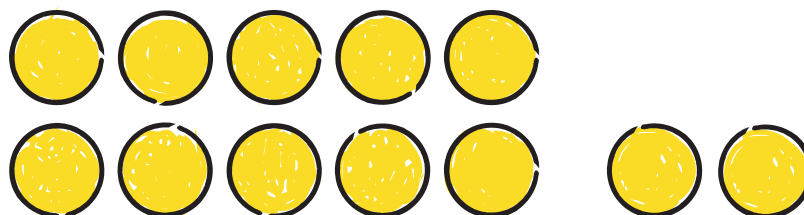
Compose Ten Ones and Some More Ones

11



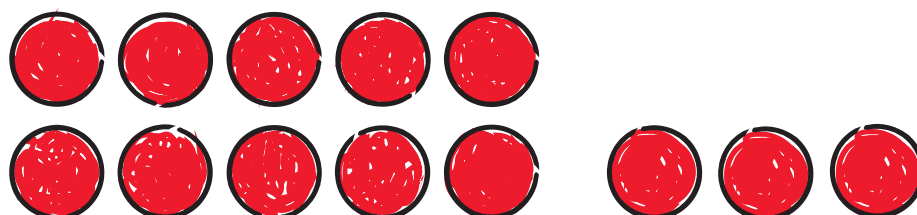
10 ones and 1 more one

12



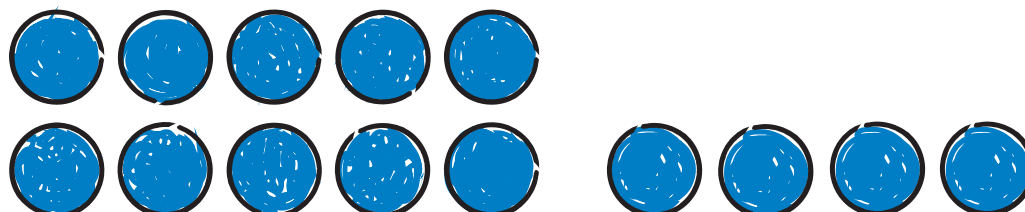
10 ones and 2 more ones

13



10 ones and 3 more ones

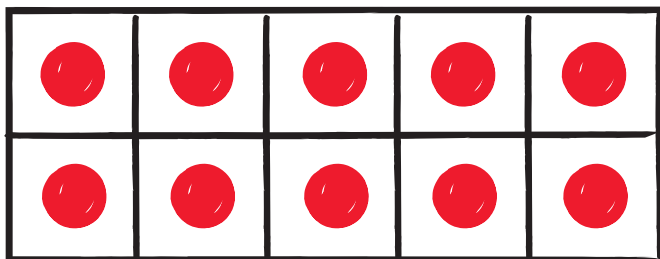
14



10 ones and 4 more ones

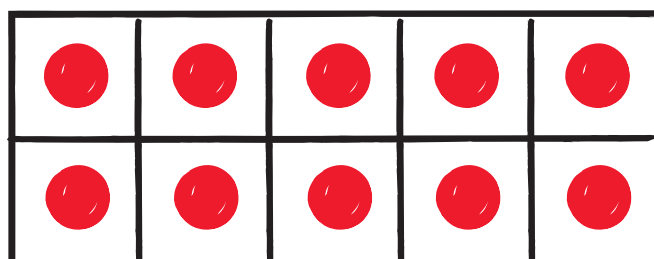
Count and Write 11 to 14

Count and write 11



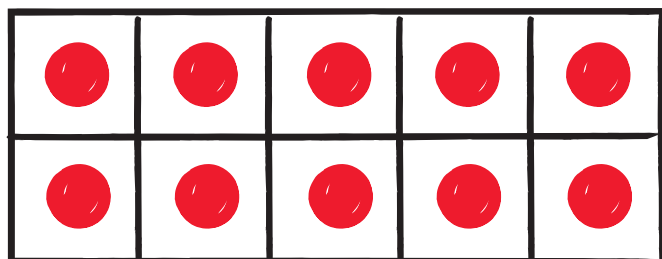
$$10 + 1 = 11$$

Count and write 12



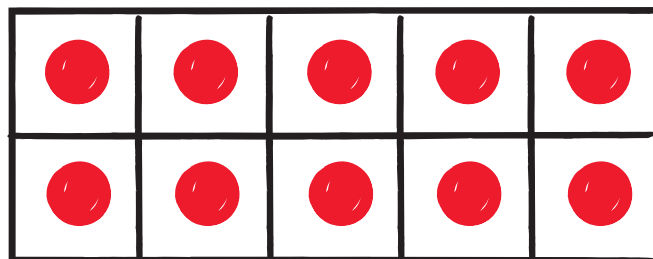
$$12 = 10 + 2$$

Count and write 13



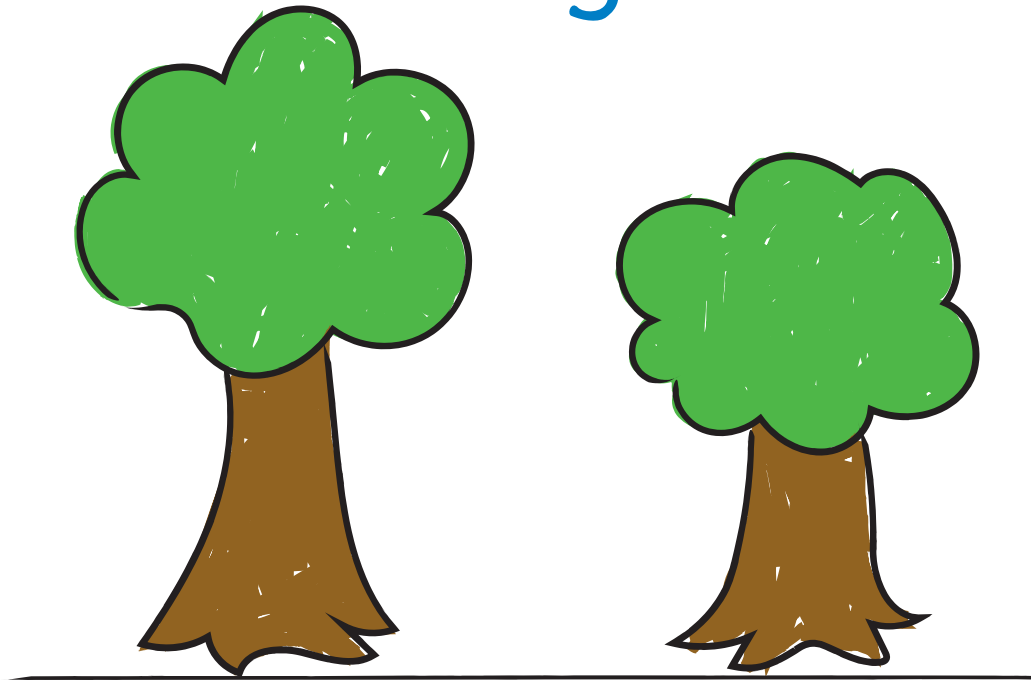
$$13 = 10 + 3$$

Count and write 14



$$10 + 4 = 14$$

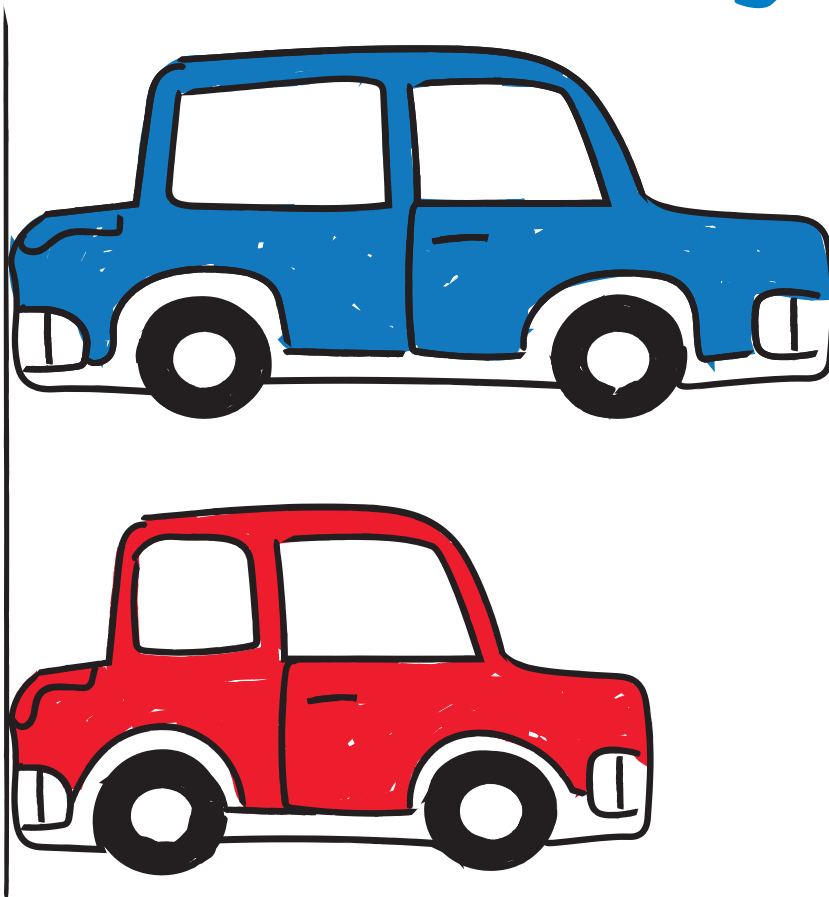
Height



Taller

Shorter

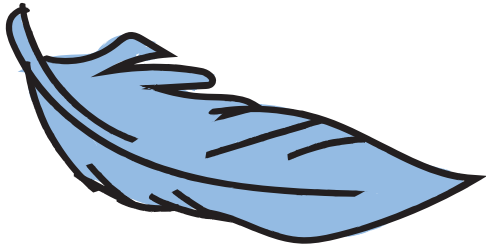
Length



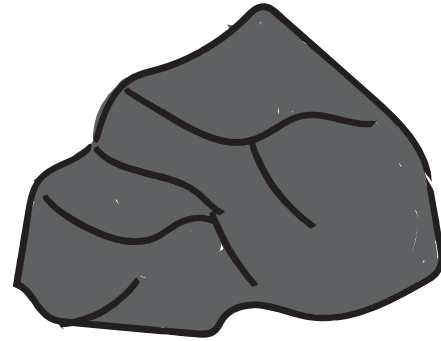
Longer

Shorter

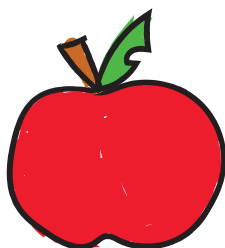
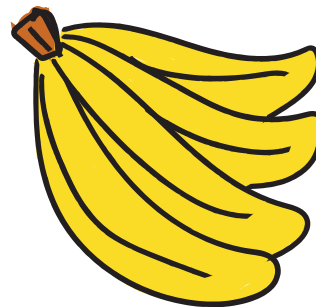
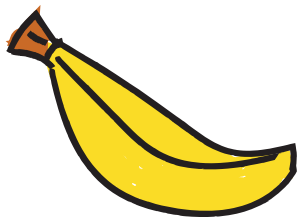
Weight



Light



Heavy



Lighter

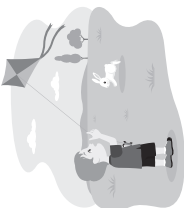







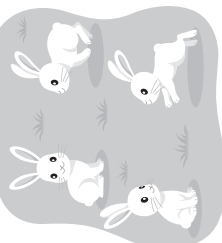
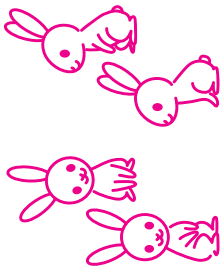


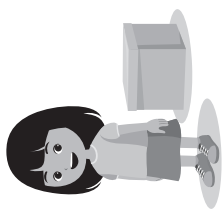
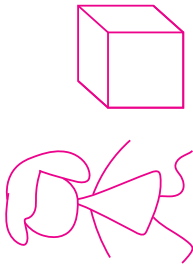
Heavier

Teacher Notes

Notes & Reflections


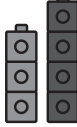

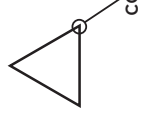

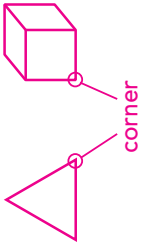
[illegible]

Interactive Glossary	
As you learn about each new term, add notes, drawings, or sentences in the space next to the definition. Doing so will help you remember what each term means.	
A	
Possible summaries: My Vocabulary Summary	
<div>above arriba, encima</div> <div></div> <div>The kite is above the rabbit.</div>	<div></div>
<div>add sumar</div> <div></div> <div>$3 + 2 = 5$</div>	<div></div> <div>$3 + 2 = 5$</div>
<div>addend el sumadol</div> <div></div> <div>$3 + 2 = 5$ addend</div>	<div></div> <div>$3 + 2 = 5$</div>
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Glossary	
J31	

Interactive Glossary	
Possible summaries: My Vocabulary Summary	
<div>Add To ampliar</div> <div></div> <div>Two bunnies add to two bunnies for a total of four bunnies.</div>	<div></div> <div>$2 + 2 = 4$</div>
<div>and y</div> <div></div> <div>and $2 + 2$</div>	<div></div> <div>and $2 + 2$</div>
B	
<div>behind detrás</div> <div></div> <div>The box is behind the girl.</div>	<div></div>
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Glossary	
J32	

Interactive Glossary

Possible summaries:
My Vocabulary Summary


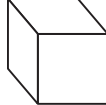



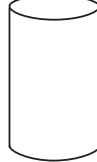

<div>column columna</div> <div></div>	<div>compare comparar</div> <div></div>	
<div>cone cono</div> <div></div>	<div>corner esquino</div> <div></div>	<div></div> <div></div>

Glossary

J35





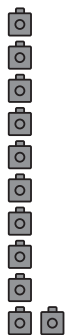

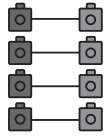
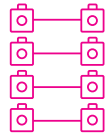




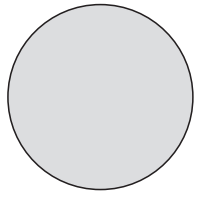
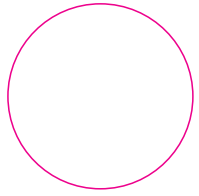
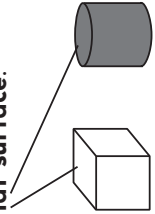

Interactive Glossary

Possible summaries:
My Vocabulary Summary

<div>count contar</div> <div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div> <div>Count the number of cubes to find the total number.</div></div>	<div>cube cubo</div> <div></div>	<div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div></div>
<div>curved surface superficie curva</div> <div></div> <div>Some solids have a curved surface.</div>	<div></div>	
<div>cylinder cilindro</div> <div></div>		<div></div>





Glossary

J36



Interactive Glossary	
<div>E</div> <div>Possible summaries:</div> <div>My Vocabulary Summary</div>	
<div>eight</div> <div>ocho</div> <div>  </div>	<div>  </div>
<div>eighteen</div> <div>dieciocho</div> <div>  </div>	<div>  </div>
<div>eleven</div> <div>once</div> <div>  </div>	<div>  </div>
<div>equal to</div> <div>igual a</div> <div>  <p>the number of cubes in the top group is equal to the number of cubes in the bottom group</p> </div>	<div>  </div>
<div>equation</div> <div>la ecuació</div> <div> $4 + 1 = 5$ </div>	<div> $4 + 1 = 5$ </div>
<div>Glossary</div> <div>J37</div>	
© Houghton Mifflin Harcourt Publishing Company	
Interactive Glossary	
<div>F</div> <div>Possible summaries:</div> <div>My Vocabulary Summary</div>	
<div>fifteen</div> <div>quince</div> <div>  </div>	<div>  </div>
<div>five</div> <div>cinco</div> <div>  </div>	<div>  </div>
<div>flat</div> <div>plano</div> <div>  <p>A circle is a flat shape.</p> </div>	<div>  </div>
<div>flat surface</div> <div>superficie plana</div> <div> <p>Some solids have a flat surface.</p>  </div>	<div>  </div>
<div>Glossary</div> <div>J38</div>	
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Interactive Glossary


Possible summaries:
My Vocabulary Summary


four cuatro 	
fourteen catorce 	

G

greater than
mayor que
 6
 9
9 is greater than 6

H

heavier
más pesado

↑ heavier

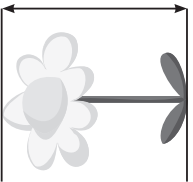
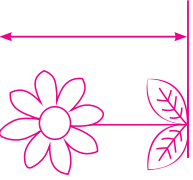
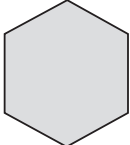



Glossary

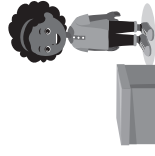
J39

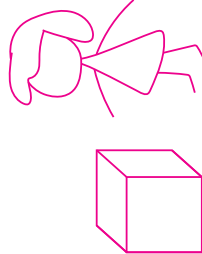
Interactive Glossary

Possible summaries:
My Vocabulary Summary

height la altural  Height: the distance from top to bottom	
hexagon hexágono 	

I

in front of
delante de

The box is in front of the girl.





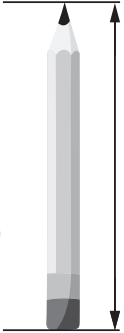



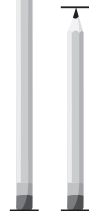


Glossary

J40

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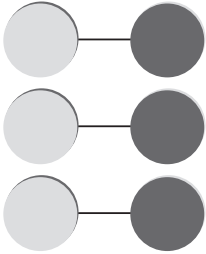
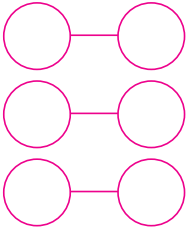

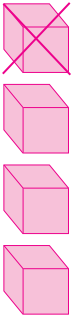
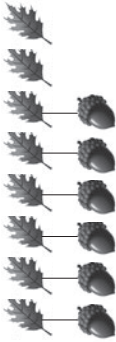
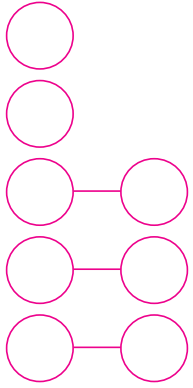
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<div>Interactive Glossary</div>	<div>Interactive Glossary</div> <div>Possible summaries:</div> <div>My Vocabulary Summary</div> <div> <div> <div>is equal to</div> <div>es igual a</div> <div> $3 + 2 = 5$ </div> <div> What is on the left side of the equal sign (=) is equal to what is on the right side of the equal sign (=). </div> </div> <div> <div>J</div> <div> <div>join</div> <div>juntar</div> <div>   $2 + 1 = 3$ </div> </div> </div> <div> <div>L</div> <div> <div>larger</div> <div>más grande</div> <div>   $2 \quad 3$ </div> <div> A quantity of 3 is larger than a quantity of 2. </div> </div> </div> </div>
<div>Possible summaries:</div> <div>My Vocabulary Summary</div>	<div> <div>length</div> <div>el largo</div> <div>  </div> <div> Length: the distance from one end of an object to the other </div> </div> <div> <div>less than</div> <div>mentos quel</div> <div>   9 9 is less than 11 </div> </div> <div> <div>lighter</div> <div>más liviano</div> <div>  </div> <div>lighter</div> </div> <div> <div>longer</div> <div>más largo</div> <div>  </div> <div>longer</div> </div>

Interactive Glossary

M

Possible summaries:
My Vocabulary Summary

<div>match emparejar</div> <div></div>	<div></div>
<div><div>minus menos</div><div>$4 - 1 = 3$</div></div> <div><div>4 minus 1 is equal to 3</div></div>	<div>$4 - 1 = 3$</div>
<div><div>more más</div><div> 2 more leaves</div></div>	<div> 2 more circles</div>

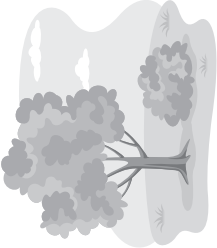
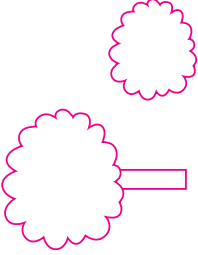






Glossary

J43

Interactive Glossary







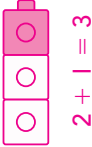





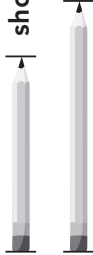
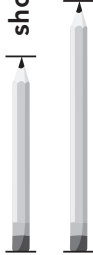
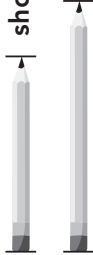
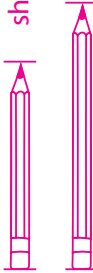


N

Possible summaries:
My Vocabulary Summary

<div><div>next to al lado de</div><div> The bush is next to the tree.</div></div>	<div></div>
<div><div>nine nueve</div><div></div></div>	<div></div>
<div><div>nineteen diecinueve</div><div></div></div>	<div></div>
<div><div>one uno</div><div></div></div>	<div></div>







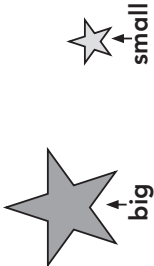
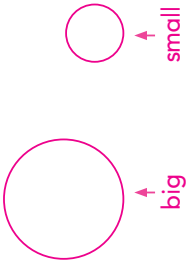
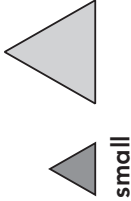
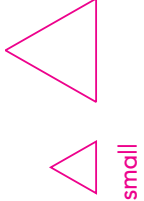
Glossary

J44

Interactive Glossary		Interactive Glossary	
Possible summaries: My Vocabulary Summary		Possible summaries: My Vocabulary Summary	
<div>ones</div> <div>unidades</div> <div>  <div>3 ones</div> </div> <div>P</div>	<div>  <div>3 ones</div> </div>	<div> <div>row</div> <div>fila</div> <div>  <div>row →</div> </div> </div> <div>S</div>	<div> <div>row</div> <div>fila</div> <div>  </div> </div>
<div>plus</div> <div>más</div> <div>  <div>2 plus 1 is equal to 3 $2 + 1 = 3$</div> </div> <div>Put Together</div> <div>armar</div> <div>  <div>$2 + 2 = 4$</div> </div> <div>R</div>	<div>  <div>$2 + 1 = 3$</div> </div> <div>  <div>$2 + 2 = 4$</div> </div>	<div> <div>seven</div> <div>siete</div> <div>  </div> </div> <div> <div>seventeen</div> <div>diecisiete</div> <div>  </div> </div>	<div> <div>seven</div> <div>siete</div> <div>  </div> </div> <div> <div>seventeen</div> <div>diecisiete</div> <div>  </div> </div>
<div> <div>shorter</div> <div>más corto</div> <div>  <div>shorter</div> </div> </div>	<div> <div>shorter</div> <div>más corto</div> <div>  <div>shorter</div> </div> </div>	<div> <div>shorter</div> <div>más corto</div> <div>  <div>shorter</div> </div> </div>	<div> <div>shorter</div> <div>más corto</div> <div>  <div>shorter</div> </div> </div>
<div>rectangle</div> <div>rectángulo</div> <div>  </div>	<div>  </div>		

Interactive Glossary

Possible summaries:
My Vocabulary Summary









<div>side lado</div> <div></div>	<div>side lado</div> <div></div>
<div>six seis</div> <div></div>	<div>six seis</div> <div></div>
<div>sixteen dieciséis</div> <div></div>	<div>sixteen dieciséis</div> <div></div>
<div>size tamaño</div> <div></div>	<div>size tamaño</div> <div></div>
<div>small pequeño</div> <div></div>	<div>small pequeño</div> <div></div>

Glossary

J47

Interactive Glossary

Possible summaries:
My Vocabulary Summary

<div>solid sólido</div> <div></div> <div>solid A cylinder is a solid shape.</div>	<div>solid sólido</div> <div></div> <div>solid</div>
<div>sort ordenar</div> <div></div> <div>All of these are gray. All of these are white. You can sort these shapes.</div>	<div>sort ordenar</div> <div></div>
<div>sphere esfera</div> <div></div>	<div>sphere esfera</div> <div></div>
<div>square cuadrado</div> <div></div>	<div>square cuadrado</div> <div></div>

Glossary

J48

Interactive Glossary

Possible summaries:

My Vocabulary Summary

subtract

restar

$3 - 1 = 2$

T

Take Apart

desmontar

$5 - 2 = 3$

take away

para llevar

Take From

lievarse

$3 - 1 = 2$

Interactive Glossary

Possible summaries:

My Vocabulary Summary

subtract

restar

$3 - 1 = 2$

T

Take Apart

desmontar

$5 - 2 = 3$

take away

para llevar

Take From

lievarse

$3 - 1 = 2$

Interactive Glossary

Possible summaries:

My Vocabulary Summary

taller

más alto

taller

ten

diez

thirteen

trece

three

tres

three-dimensional shapes

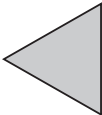







figuras tridimensionales

Planning and Pacing Guide

PG115

Interactive Glossary

Possible summaries:
My Vocabulary Summary

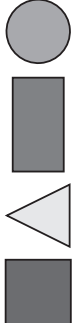
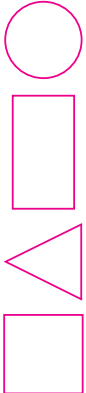
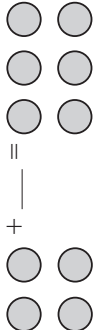





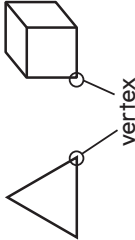

total sumar ●● + ●●●●●● = ●●●●●● 2 + 4 = 6 total Adding 2 marbles to 4 marbles makes a total of 6 marbles.	○○ + ○○○○ = ○○○○○○ 2 + 4 = 6 total
triangle triángulo 	
twelve doce 	
twenty veinte 	
two dos 	

J51

Glossary

Interactive Glossary

Possible summaries:
My Vocabulary Summary

two-dimensional shapes figuras bidimensionales 	
U unknown la incógnita 4 + ____ = 6  + ____ =  4 + ____ = 6  + ____ =  4 + ____ = 6	 + ____ =  4 + ____ = 6
V vertex vértice 	

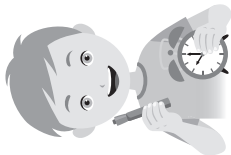
J52

Glossary

Interactive Glossary

W

weight
el peso



Weight: how heavy or light something is



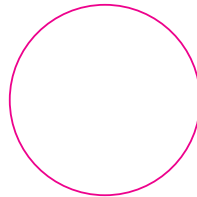
Possible summaries:
My Vocabulary Summary

Z

zero
cero



there are **zero** fish, none



Glossary

J53

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anchor chart, every module includes a completed

anchor chart. *8B, 32B, 56B, 84B, 104B, 146B, 190B, 206B,*

226B, 242B, 270B, 312B, 342B, 368B, 392B, 408B, 442B,

462B, 484B, 500B

Anchor charts are also available in the *Teacher Edition:*

Planning and Pacing Guide PG85–PG104

Are You Ready?, appears in every module. 4, 28, 52,

80, 100, 142, 186, 202, 222, 238, 266, 308, 338, 364, 388,

404, 438, 458, 480, 496

assessment

Are You Ready?, appears in every module. 4, 28, 52, 80,

100, 142, 186, 202, 222, 238, 266, 308, 338, 364, 388,

404, 438, 458, 480, 496

Check Understanding, appears in every lesson. *See, for*

example, 7, 19, 23, 31, 35, 39, 42, 46, 55, 59, 63, 67, 71,

74, 83, 87, 91, 94, 103, 107, 112, 123, 212, 390, 499

diagnostic assessment

Are You Ready? (*see* Are You Ready?)

formative assessment

Check Understanding (*see* Check Understanding)

Module Review, every module includes a Module Review

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Module Test, every module includes a Module Test with

an alternate version. *26A, 50A, 78A, 98A, 140A, 182A,*

200A, 220A, 236A, 264A, 306A, 336A, 360A, 386A, 402A,

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 TE Book 2 51A–78A
 TE Book 3 79A–98A
 TE Book 4 99A–140A
 TE Book 5 141A–182A

TE Book 6 183–220A
 TE Book 7 221A–264A
 TE Book 8 265A–306A
 TE Book 9 307A–336A
 TE Book 10 337A–360A

TE Book 11 361–402A
 TE Book 12 403A–434A
 TE Book 13 435–476A
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Teacher Edition: Planning and Pacing Guide PG1–PG123

Teacher Edition references are in italics;
Teacher Edition: Planning and Pacing Guide
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data checkpoint, every module includes an autoscored Are You Ready? diagnostic assessment and a Module Test summative assessment. Every lesson includes an autoscored Check Understanding formative assessment. When you assign autoscored assignments on Ed: Your Friend in Learning, you will have immediate access to data and recommendations for differentiation.

Are You Ready?, appears in every module. 4, 28, 52, 80, 100, 142, 186, 202, 222, 238, 266, 308, 338, 364, 388, 404, 438, 458, 480, 496

Check Understanding, appears in every lesson. *See, for example*, 7, 11, 15, 19, 23, 31, 35, 39, 43, 47, 55, 59, 63, 67, 71, 75, 83, 87, 91, 95, 103, 107

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data-driven instruction, every module includes data charts to help you drive instruction to support students for the Are You Ready? and Module Review assessments. Every lesson includes differentiation support following the Check Understanding assessment to support students. *Teacher Edition: Planning and Pacing Guide* PG24–PG31

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diagnostic assessment

Are You Ready? (*see* Are You Ready?)

differentiated instruction, every lesson includes leveled activities for pulled small groups and leveled print and digital activities for Math Centers. Some examples are 5C, 9C, 13C, 17C, 21C, 29C, 33C, 37C, 41C, 45C, 53C, 57C, 61C, 65C, 69C, 73C, 81C, 85C, 89C, 93C

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Exit Ticket, every lesson provides a projectable Exit Ticket.

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Collect and Display, some examples are 8B, 32B, 56B, 84B, 104B, 146B, 190B, 206B, 226B, 242B

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Mathematical Practices and Processes

1. *make sense of problems and persevere in solving them*, occurs throughout. Some examples are 58–59, 102–103, 110–111, 164–165
2. *reason abstractly and quantitatively*, in some lessons. Some examples are 6–7, 54–55, 440–441, 460–461
3. *construct viable arguments and critique the reasoning of others*, in some lessons. Some examples are 54–55, 482–483, 490–491, 498–499
4. *model with mathematics*, in some lessons. Some examples are 122–123, 165–166, 281–282, 334–338
5. *use appropriate tools strategically*, in some lessons. Some examples are 196–197, 240–241, 318–319
6. *attend to precision*, in some lessons. Some examples are 62–63, 228–229, 390–391, 406–407
7. *look for and make use of structure*, in some lessons. Some examples are 26–27, 460–461, 482–483
8. *look for and express regularity in repeated reasoning*, in some lessons. Some examples are 228–229, 318–319, 352–353, 440–441, 452–453, 486

Mathematical Progressions, each TE module and lesson includes a Mathematical Progression for current development, prior learning, and future connections.

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Math on the Spot videos, some lessons feature a Math on the Spot video problem. Some examples are 12A, 16A, 48A, 56A, 60A, 68A, 92A, 104A, 126A, 132A, 150A
See also student and parent resources on Ed: Your Friend in Learning

Math Routine. See under Warm-Up Options

Math Teaching Practices

1. *establish mathematics goals to focus learning*, occurs throughout. Some examples are 3B, 5A, 27B, 29A
2. *implement tasks that promote reasoning and problem solving*, occurs throughout. Some examples are 99B, 101D, 105D
3. *use and connect mathematical representations*, occurs throughout. Some examples are 185B, 187D, 191D
4. *facilitate meaningful mathematical discourse*, occurs throughout. Some examples are 221B, 228, 363B, 370
5. *pose purposeful questions*, occurs throughout. Some examples are 3B, 6, 79B, 81, 437B, 440, 479B, 482
6. *build procedural fluency from conceptual understanding*, occurs throughout. Some examples are 141B, 154, 307B, 320
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TE Book 2 51A–78A
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TE Book 13 435–476A
TE Book 14 477–510A

Teacher Edition: Planning and Pacing Guide PG1–PG123

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references begin with PG.

Module Review, every module includes a Module Review with a possible scoring guide for all items. 25–26, 49–50, 77–78, 97–98, 139–140, 181–182, 199–200, 219–220, 235–236, 263–264, 305–306, 335–336, 359–360, 385–386, 401–402, 433–434, 455–456, 475–476, 493–494, 509–510

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Tabletop Flipcharts Mini-Lesson, every lesson includes a Tabletop Flipchart Mini-Lesson for teachers to use with a small, pulled group of students who are almost there. Some examples are 5C, 9C, 13C, 17C, 21C, 29C, 33C, 37C, 41C, 45C, 53C, 57C, 61C, 65C, 69C, 73C, 81C, 85C, 89C, 93C

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