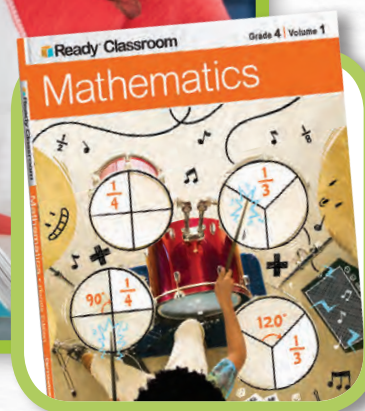
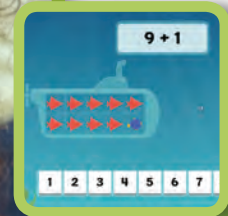


## PROGRAM OVERVIEW

# Ready<sup>®</sup> Classroom Mathematics

*Practical routines, meaningful conversations,  
powerful results.*



# Making Classrooms Better Places for Teachers and Students

Our mission is to help students become strong, independent mathematical thinkers. *Ready Classroom Mathematics* takes a unique, yet proven approach that builds upon research-based practices that get results. Through a blend of purposeful print and digital components, this intentional design makes mathematics accessible, increases student engagement, and builds confidence. Everything works together to support teachers and help students connect to mathematics in new ways.

*Ready Classroom Mathematics* is built on the foundation of a program highly rated by EdReports, *Ready Mathematics*.

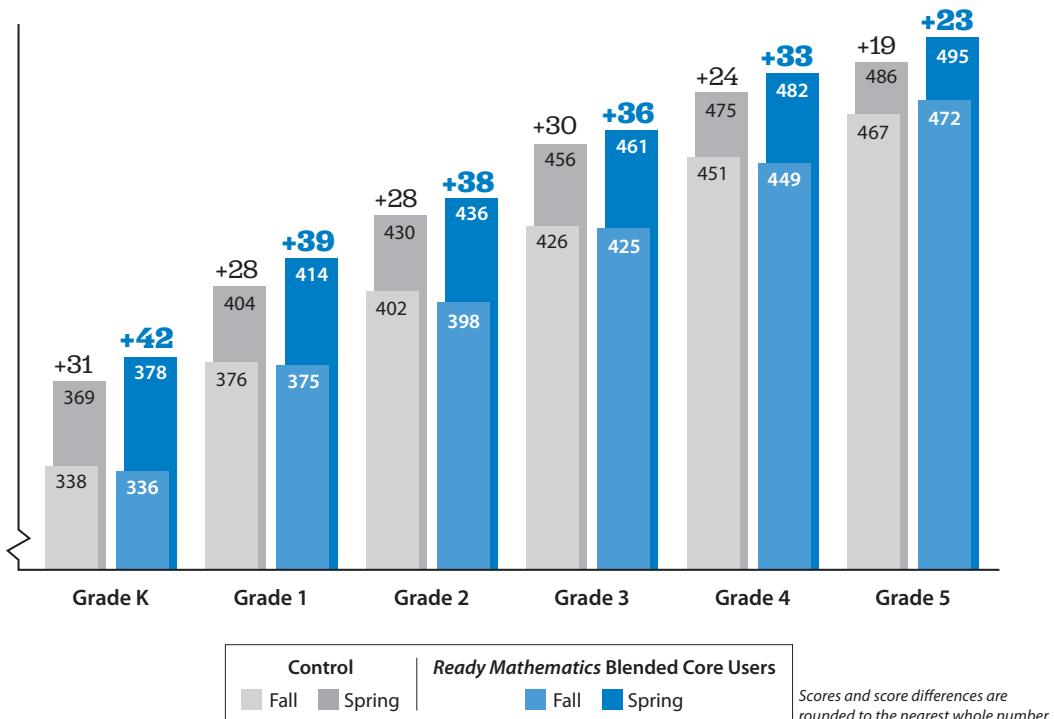
## Built on a Proven Program

We measure ourselves by the impacts we make for teachers and students. Our programs are continually tested and refined. *Ready Classroom Mathematics* is the next evolution of the *Ready Mathematics* program with enhancements designed to maximize student success.

Third-party research provides evidence that when using *Ready Mathematics* in a blended setting, students in Grades K-5 performed significantly better in mathematics than students not using the program.

To view the full report, please visit: [CurriculumAssociates.com/Ready-Math-Blended-ESSA](http://CurriculumAssociates.com/Ready-Math-Blended-ESSA)

Figure 1. *i-Ready Diagnostic (Mathematics) Scale Score Differences*





## Students Take Ownership of Their Learning

Invite students to be active participants in math class. The effective lesson design and easy instructional routine provide the structure and support that enable students to persevere, develop deep conceptual understanding, and become independent learners.

**Page 4**



## Practice Matches the Rigor of the Standards

Prepare students for high-stakes assessments with quality practice that reflects the rigorous expectations of the standards. Rich and varied practice opportunities deepen the conceptual and procedural connection for students, helping them develop greater number sense and fluency.

**Page 13**



## Teachers Use Data to Differentiate Instruction

Get to know each student better and make instructional decisions that help all students reach their greatest potential. Powerful tools, like our valid and reliable adaptive Diagnostic assessment, pinpoint students' strengths and areas of instructional need. Comprehensive resources are provided to address the needs of all learners.

**Page 16**



# Designed to Deliver Powerful Results

When it comes to addressing the College and Career Readiness Standards, teachers have a lot to do. Everything in *Ready Classroom Mathematics* optimizes instructional time while deepening student understanding. Rich tasks and targeted support allow students to make multiple connections between the content standards and the Standards for Mathematical Practice.

LESSON 8  
**Develop** Using Grouping to Multiply

SESSION 3 ● ● ● ● ●

Read and try to solve the problem below.

**Nycole** decorates a pair of gloves with plastic jewels. She glues 3 jewels onto each finger, including thumbs. How many jewels does she use?

**TRY IT**

**Math Tools**

- counters
- buttons
- index cards
- sticky notes
- multiplication models
- number lines

**DISCUSS IT**

**Ask your partner:** Do you agree with me? Why or why not?

**Tell your partner:** I am not sure how to find the answer because...

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**Support Whole Class Discussion**

**Compare and connect** the different representations and have students identify how they are related.

**Ask** How is the number of fingers represented in each model? How is the number of jewels on each finger represented? How is the number of gloves represented?

**Listen for** There are 5 fingers on each glove; each finger has 3 jewels; there are 2 gloves. Models show 5 groups of 3 twice.

**Embedded Teacher Support:** Integrate NCTM’s Effective Teaching Practices with the best ways to promote and facilitate mathematical discourse.

SESSION 3 ● ● ● ● ●

**CONNECT IT**

Now you will use the problem from the previous page to help you understand how to group factors in different ways.

- Use parentheses to show one way to group  $2 \times 5 \times 3$ .
- Use parentheses to show a different way to group  $2 \times 5 \times 3$ .
- Which way would you choose to find the product? Explain why.
- Explain how you can use grouping to make multiplying three factors easier.

**REFLECT**

Look back at your **Try It**, strategies by classmates, and **Picture It** and **Model It**. Which models or strategies do you like best for showing that you can change the grouping of the factors in a multiplication problem and still get the same product? Explain.

©Curriculum Associates, LLC. Copying is not permitted. Lesson 8 Use Order and Grouping to Multiply 195

**High-Ceiling/Low-Threshold Tasks:** These tasks allow students to naturally engage in the mathematical practices in a meaningful way.



**Questions for Deeper Understanding:** Students answer critical-thinking questions that help them make explicit connections between multiple strategies.

## Different Lesson Types to Address All Aspects of Rigor

**Understand Lessons:** These lessons focus primarily on conceptual understanding and occur at key points in the instructional sequence.

**Strategy Lessons:** These lessons let students develop and discuss a variety of solution strategies, helping them make richer connections and deepen their understanding.

**Math in Action Lessons (Grades 2–5):** These lessons review unit content and teach students how to develop complete responses to a performance task.

Lesson	Topic	Standards	Page
Unit Opener			299
Build Your Vocabulary			300
Lesson 14	Understand Area	SMP 1, 2, 3, 4, 5, 6	301
Lesson 15	Multiply to Find Area	SMP 1, 2, 3, 4, 5, 6, 7, 8	313
Lesson 16	Add Areas	SMP 1, 2, 3, 4, 5, 6, 7	335
Lesson 17	Solve One-Step Word Problems Using Multiplication and Division	SMP 1, 2, 3, 4, 5, 6, 7	357
Lesson 18	Solve Two-Step Word Problems Using the Four Operations	SMP 1, 2, 3, 4, 5, 6	385
Lesson 19	Scaled Graphs	SMP 1, 2, 3, 4, 5, 6, 7	413
Self Reflection			441
Math in Action	Use the Four Operations		442
Unit Review			450
Vocabulary			453

## Multiple-Day Lessons Provide More Time for Deeper Understanding

Deep conceptual understanding of the standards doesn't happen in a day. To give students time to dig deeper into the concepts, the lessons in *Ready Classroom Mathematics* span multiple days. Lessons are divided into Explore, Develop, and Refine sessions.

Day 1	Day 2	Day 3	Day 4	Day 5
Explore Session	Develop Session	Refine Session	Refine Session	Lesson Quiz and Differentiation
Make connections to prior knowledge and explore new concepts.	Develop strategies and understanding through discourse and problem solving.	Practice, deepen understanding, and differentiate.	Practice, deepen understanding, and differentiate.	Assess understanding of lesson content and differentiate.

*Example of Grade 2 Week of Instruction. See the following pages for more about each type of session.*

# Multiple-Day Lesson Structure

## Explore Session

The Explore session is an instructional day that connects previously learned concepts to the new ideas of the lesson. A high-level task appears throughout each session to ensure deep understanding of the mathematical goals of the lesson.

LESSON 12

### Explore Making a Ten to Add

SESSION 1 ● ● ● ● ●

**9 children are on the bus.**  
**4 more children get on the bus.**  
**How many children are on the bus?**

**Learning Target**

- Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

**Try It**

**Math Toolkit**

- counters

©Curriculum Associates, LLC. Copying is not permitted. Lesson 12 Make a

**Access for All:** Rich tasks provide multiple entry points to engage individual students' preconceptions and build on prior knowledge.

**Try It**

**Materials** For each child: 20 two-color counters; For display: 13 chairs (or 13 Xs taped to the floor)

**Act Out Making a Ten**

Read the problem aloud together.

Arrange 13 or more chairs (or 13 Xs taped to the floor) in a 10-frame configuration plus others to the side to represent seats on the bus. Invite 9 children to sit down "on the bus." Have 4 other children stand to the side.

**Ask** If you have more children get on the bus until there are 10 on the bus altogether, how many more can get on the bus?

**Listen for** Encourage a variety of answers and then say: *Let's find out!*

Have 1 child sit as the class counts from 9 up to 10.

**Ask** You don't have all the children on the bus yet, but can you tell how many there will be? How can you tell?

**Listen for** There are 10 seats filled, and 3 more children, for a total of 13.

Have children work in pairs to represent the problem they acted out using counters on the "bus" workmat on the Student Worktext page.

**Honoring Play:** Students in Grades K–1 actively engage in the mathematics to make connections between what they learn and their own experiences.

Example of a Grade 1 Explore Session

**Interactive Tutorials:** These animated tutorials engage students during whole class instruction.

9 + 1

1 2 3 4 5 6 7 8 9 10



## Develop Session

The Develop session engages students in creating, discussing, and comparing different strategies to solve a problem. Students use the same problem throughout instruction, allowing time for students to think critically about new mathematical ideas.

**LESSON 18**  
**Develop Fractions as Division**

Read and try to solve the problem below.

Jared, Monica, and Heather have 5 hallways to decorate for the student council. If they share the work equally, how much will each student decorate?

**TRY IT**

**DISCUSS IT**  
**Ask your partner:** Do you agree with me? Why or why not?  
**Tell your partner:** I disagree with this part because ...

**Discuss Strategies:** Students solve problems using the strategies and tools of their choice and then discuss their ideas in pairs and with the class.

**CONNECT IT**  
 Now you will use the problem from the previous page to help you understand fractions as quotients.

- How many thirds of a hallway are there to decorate in 5 hallways? \_\_\_\_\_ thirds
- How many thirds of a hallway will each student decorate? \_\_\_\_\_ thirds  
 Write this as a fraction. \_\_\_\_\_ of a hallway
- Write a division equation that shows the quotient as a fraction. \_\_\_\_\_  
 Write a multiplication equation to check this equation. \_\_\_\_\_

**Make Connections:** Students make connections between the strategies discussed and those in the book to reinforce and extend their understanding.

## Refine Session

The Refine session provides dedicated class time for students to strengthen their skills through practice and applications. Students spend time building fluency and checking understanding.

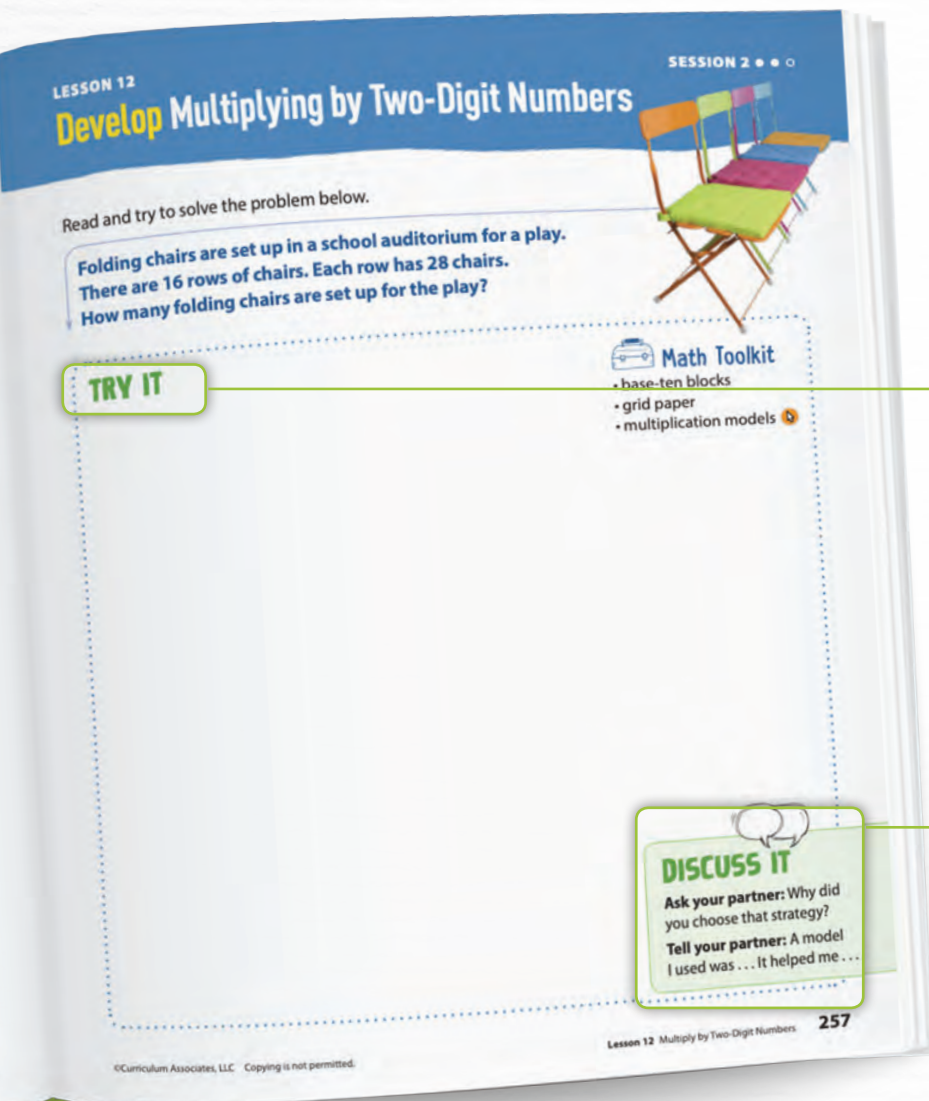
Refine Session Differentiated Instruction			
Reteach	Reinforce	Extend	Personalize
Teacher-led Hands-On Activities help students who still struggle with lesson concepts.	Additional on-level work helps all students strengthen their understanding.	The Challenge Activity asks students to go deeper into the lesson concept.	With the addition of <i>i-Ready</i> ® Online Instruction, a personalized instruction path helps students fill prerequisite gaps and build up grade-level skills.

**Assess and Differentiate:** At the beginning of the Refine session, teachers evaluate student work and may group students for differentiation.

# Math Shouldn't Be Quiet

When students do the thinking and talking, they are able to better process, synthesize, and retain ideas leading to greater understanding. The manageable routines in *Ready Classroom Mathematics* get students doing what they already love—talking. But this time, they're talking about mathematics.

The Develop sessions use the Try–Discuss–Connect routine to spark meaningful partner and whole class discussions. This strengthens students' understanding and helps them become independent learners.



## Try It

The teacher introduces a real-world problem and guides the class through a routine to help students make sense of the problem.

Students are given time to think about how they might solve the problem, and then they try it on their own using whatever approaches or tools they choose.

## Discuss It

Students turn and talk to a partner about their strategies. The teacher monitors the discussions and asks questions to help make students' thinking clear and visible.

Student work is strategically shared with the class to progressively build conceptual understanding during class discussion.

Example of Grade 4 Try It and Discuss It





## Connect It

Students discuss and complete questions that promote deeper connections between their solutions, other students' solutions, and the mathematical ideas of the lesson.

### CONNECT IT

Now you will use the problem from the previous page to help you understand how to multiply a two-digit number by a two-digit number.

- 1 Why is the area model divided into four sections?
- 2 How do the four steps in the multiplication using partial products in **Model It** relate to the four sections in the area model in **Picture It**?
- 3 What is the sum of the partial products and also the product of 28 and 16?
- 4 Would the product change if 20 + 8 on the top of the area model were changed to 10 + 10 + 8? Explain.
- 5 How could you estimate to check the reasonableness of your answer to  $28 \times 16$  by multiplying with easier numbers?

### 6 REFLECT

Look back at your **Try It**, strategies by classmates, and **Picture It** and **Model It**. Which models or strategies do you like best for multiplying a two-digit number by a two-digit number? Explain.

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## LESSON 12 DEVELOP

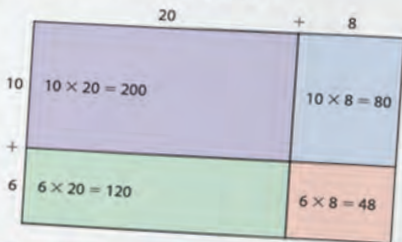
Explore different ways to understand multiplying a two-digit number by a two-digit number.

Folding chairs are set up in a school auditorium for a play. There are 16 rows of chairs. Each row has 28 chairs. How many folding chairs are set up for the play?

### PICTURE IT

You can use an area model to multiply two-digit numbers.

To solve this problem, multiply 28 by 16.



$$200 + 80 + 120 + 48 = ?$$



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### MODEL IT

You can also multiply two-digit numbers using partial products.

$$\begin{array}{r}
 28 \\
 \times 16 \\
 \hline
 48 \rightarrow 6 \text{ ones} \times 8 \text{ ones} \\
 120 \rightarrow 6 \text{ ones} \times 2 \text{ tens} \\
 80 \rightarrow 1 \text{ ten} \times 8 \text{ ones} \\
 + 200 \rightarrow 1 \text{ ten} \times 2 \text{ tens} \\
 \hline
 ?
 \end{array}$$

Example of Grade 4 Connect It

**What does this look like in the classroom?**

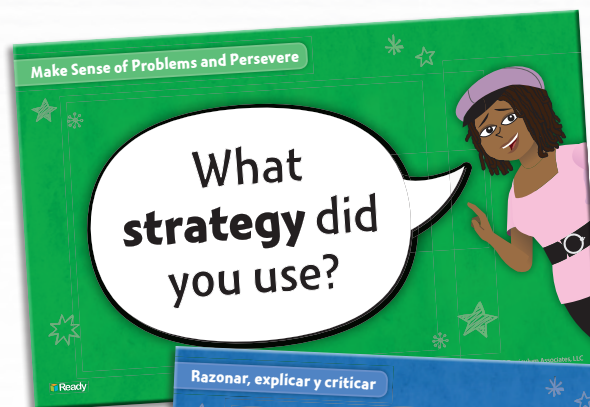
Visit [CurriculumAssociates.com/TDC](http://CurriculumAssociates.com/TDC) to see the Try-Discuss-Connect routine in a real classroom!

# Build a Culture for Learning

Ready Classroom Mathematics provides practical, built-in support—including instructional routines and discourse moves—to help teachers implement effective instructional practices and engage students in the mathematical practices.

## Promote Participation in Classroom Conversations

- **Discourse Cards and Cube:** These resources provide a question or a sentence starter to get students talking about mathematics. Available in English and Spanish.
- **Discussion Prompts:** The Teacher's Guide includes discourse support to help teachers clarify student thinking and deepen their conceptual understanding.
- **Language Routines:** These research-based instructional routines, used in conjunction with discussion supports, encourage oral participation and advance discourse as they help students learn to use the specialized academic language of mathematics.



Discourse Cards and Cube



# Connect Community, Family, and Language Development

- Community and Cultural Responsiveness:** Strategies are provided to increase connections and encourage engagement for all students.
- Family Letters:** Keep parents in the loop! Each letter includes an activity related to the lesson. Available for every lesson in English and Spanish.
- Language Expectations:** Every unit includes a chart outlining what students should be able to do at various proficiency levels.
- Academic Vocabulary Routine:** This routine engages students in their understanding of all-purpose academic words. A Cognate Support routine is provided for Spanish speakers or other Latin-based languages.
- Language and Discourse Support:** Lessons provide opportunities to build and develop students' receptive and productive language skills.
- Differentiation for English Learners:** Reading, writing, speaking, and listening support for all five WIDA language proficiency levels.

## Connect to Community and Cultural Responsiveness

Use these activities to connect with and leverage the diverse backgrounds and experiences of all children.

### Session 1 Use with Try It.

In small groups, have children talk with each other about how they get to school. If they are from other countries, encourage them to discuss what type of transportation they used and how it might differ from the mode their family uses now. Extend children's thinking by asking why some children may need to take the bus. Possible responses could include distance or busy roads. Ask them why some buses are smaller than others. Help children make the connection that a smaller bus will transport fewer passengers.

### Session 2 Use with Try It.

A 10-frame is an abstract representation for some children. Help them connect their fingers to the 10-frame by placing the frame in a vertical position and having children place their hands palms up with each finger aligned to a space on the frame. Ask children to think of other items that could make a group of ten.

### Session 3 Use anytime during this session.

The goal of this session is to encourage children to have a growth mindset. Ask children if they have ever completed a puzzle. If children do not have adequate background knowledge, show a few puzzle pieces and demonstrate trying to fit the pieces together. Help children make the connection that there are two numbers that always come together to make a 10, similar to two puzzle pieces fitting together. If children struggle with separating and joining numbers while using the make a ten strategy, encourage them to persist.

### Sessions 4 and 5 Use anytime during these sessions.

As children become accustomed to using math tools to solve problems, have them think of other areas of their lives where they use tools to accomplish specific tasks or projects. For example, ask: *What tools do you use to work on art projects? Do you use tools such as crayons, paint, markers, paper, scissors, and glue? What tools might be used in sports such as soccer or basketball? What tools might be used to travel?*

**Add and Subtract Fractions**

Dear Family,

This week your child is learning how to add and subtract fractions with like denominators.

Fractions with the same number below the line have like denominators.

Like denominators:  $\frac{1}{2}$  and  $\frac{1}{2}$  Unlike denominators:  $\frac{1}{2}$  and  $\frac{1}{3}$

To find the sum of fractions with like denominators, add the numerators. Just as 3 apples plus 2 apples is 5 apples,  $\frac{1}{2}$  plus  $\frac{1}{2}$  is  $\frac{2}{2}$ . Similarly, when you take away 5 eighths, you have 3 eighths left.

You can also use a number line to understand adding and subtracting like fractions.

Remember that the denominator names units or names units.

So, when you add two fractions with like denominators, you are adding units.

When you subtract two fractions with like denominators, you are subtracting units.

Invite your child to share what he or she knows about fractions by doing the following activity together.

**Build Your Vocabulary**

**Math Vocabulary**

Label the illustrations with a review fraction word. Then compare and discuss your answers with your partner.

Work with your teacher to complete the sentence frames below using the compare review words.

88 is \_\_\_\_\_ 81.

56 is \_\_\_\_\_ 61.

**Academic Vocabulary**

Put a check next to the academic words you know. Then use the words to complete the sentences.

decide label point out however

1 I would like to \_\_\_\_\_ that the shape is divided into \_\_\_\_\_.

2 He thought the shape was divided into fourths, \_\_\_\_\_ when he looked again, he realized it was divided into thirds.

3 I will \_\_\_\_\_ an illustration of a cube by writing the word \_\_\_\_\_ under it.

4 When you solve problems, you can \_\_\_\_\_ what strategies \_\_\_\_\_ to use to help solve them.

## Academic Vocabulary Routine

Use with *Build Your Vocabulary*.

- Assess prior knowledge.**
  - Assess prior knowledge by asking students to place a checkmark next to any vocabulary words they know or are familiar with.
  - Have students work in pairs to briefly discuss how and when they have used the words. Listen to assess if perceived knowledge is correct.
  - If you have Spanish speakers or speakers of other Latin-based languages, use the *Cognate Support Routine*.
- Pronounce the words.**
  - Review the *Academic Vocabulary*.
  - Say each of the words aloud and then have students repeat to ensure correct pronunciation.
- Define the words.**
  - Call on volunteer pairs to provide meanings of the words they know.
  - Note which word(s) need more direct instruction and modeling.
  - Model the usage of the word(s) in context, using topics that connect with students in a meaningful way.
  - Provide the meaning of the word(s). See *Academic Vocabulary Glossary* on the *Teacher Toolbox*.
- Use the words.**
  - Have students write the word(s), their own descriptions or examples, and a picture, symbol, or graphic representation in their math journal.
  - Review the activity as a whole class and remediate where needed.

## ELL English Language Learners: Differentiated Instruction Prepare for Session 1 Use with Connect It.

**Levels 1-3**

**Listening/Speaking** Think aloud with children as they use the counters on the 10-frame workmat to help them solve the *Connect It* problem. Point to the counters. Say: *You have 9 children on the bus. Point to the 1 counter that makes 10. Say: You added one more child to make 10. Point to the four remaining counters. 4 more children will get on the bus. Ask: How did you solve the problem? Pause so that children can complete relevant information. I have \_\_\_\_\_ children on the bus. I added one more child to make 10. \_\_\_\_\_ more children will get on the bus. I have \_\_\_\_\_ children.*

**Levels 2-4**

**Listening/Speaking** Think aloud with children as they work through the *Connect It* problem. Say: *You have 9 children on the bus. You added one more child to make 10. 4 more children will get on the bus. You have 14 children on the bus. Have children retell the steps they used to solve the problem in their own words. If children need additional support, prompt them with questions such as: How many children are on the bus? What did you do next? How did you solve the problem? Have children respond to the questions with complete sentences.*

**Levels 3-5**

**Speaking/Listening** Encourage children to think aloud using the sequence words *first*, *next*, and *then* as they work through the *Connect It* problem. Pair them up to discuss the steps they used to solve the problem. For children who need additional support, ask questions to prompt their thinking. For example, ask: *What did you do first? What did you do next? What did you do at the end? Tell children to use the word solve in their responses. Have children share their partner's response with the class.*





# High-Quality Independent Practice

Practice needs to build conceptual understanding and match the rigorous expectations of the standards. *Ready Classroom Mathematics* provides questions and practice problems that solidify students' conceptual understanding before providing computational practice used to develop fluency.

## Additional Practice in Student Worktext:

In every session, students build proficiency with the strategies learned in class and apply those ideas to answer critical thinking questions and new problems.

## Practice That Targets All Aspects of Rigor:

Questions are written to let students explore conceptual understanding, procedural fluency, and application.

Name: \_\_\_\_\_

LESSON 33 SESSION 2

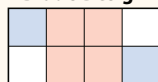
## Practice Partitioning Shapes into Equal Parts

Study the Example showing how to divide rectangles into equal parts. Then solve problems 1–10.

### EXAMPLE

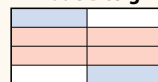
Brad and Linda each cover a same-sized board with mosaic tiles. Here are the designs they made. What part of Brad's design is red tiles? What part of Linda's design is red tiles?

Brad's Design



2 rows of 4 tiles = 8 tiles  
 $\frac{4}{8}$ , or  $\frac{1}{2}$ , of the tiles are red.

Linda's Design



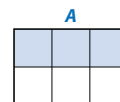
4 rows of 2 tiles = 8 tiles  
 $\frac{4}{8}$ , or  $\frac{1}{2}$ , of the tiles are red.



## Strategic Scaffolds Help Students Achieve Independence:

An example problem at the beginning of each practice section provides a refresher for students and supports parents.

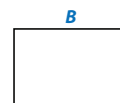
1 How many equal parts are in rectangle A? .....



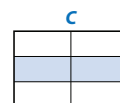
2 How many rows are in rectangle A? .....

3 What fraction of the total area of rectangle A is shaded? .....

4 Use rectangle B to show another way to divide a rectangle into 6 equal parts. What unit fraction is each part? .....



5 What fraction of the total area of rectangle C is shaded? Tell how you know.



# Multiple Practice Opportunities Build Students' Confidence

Effective mathematics practice needs to be more than asking students to memorize math facts and recall answers to questions. *Ready Classroom Mathematics* provides a variety of practice opportunities to help students build conceptual understanding and demonstrate procedural fluency by experiencing mathematics in multiple ways.

## Refine Sessions:

To help students solidify their understanding, each lesson provides one to two days of in-class practice time with the support of other students and the teacher.

LESSON 20 **Refine** Adding and Subtracting Fractions SESSION 5 ●●●●●

Complete the Example below. Then solve problems 1–9.

**EXAMPLE**

Jessica hikes  $\frac{2}{5}$  of a mile on a trail before she stops to get a drink of water. After her drink, Jessica hikes another  $\frac{2}{5}$  of a mile. How far does Jessica hike in all?

Look at how you could show your work using a number line.

**Solution** .....

The student used labels and “jump” arrows to show each part of the hike on a number line. It is just like adding whole numbers!

**PAIR/SHARE**  
How else could you show this problem?

What fraction represents the whole fruit smoothie?

**PAIR/SHARE**  
How did you and your partner decide which fraction to start with?

**APPLY IT**

1 Ruth makes 1 fruit smoothie. She drinks  $\frac{1}{3}$  of it. What fraction of the fruit smoothie is left? Show your work.

**Solution** .....

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Example of Grade 2 Refine Session

Fluency and Skills Practice

**Rounding Whole Numbers** Name: \_\_\_\_\_

Round each number to the nearest ten.

1 72      2 172      3 2,572      4 101,372

Round each number to the nearest hundred.

5 180      6 1,180      7 56,180

8 980      9 1,980      10 56,980

Round each number to the nearest thousand.

11 7,750      12 17,750      13 25,750      14 70,750

Round each number to the nearest ten thousand.

15 65,321      16 165,321      17 185,321      18 205,321

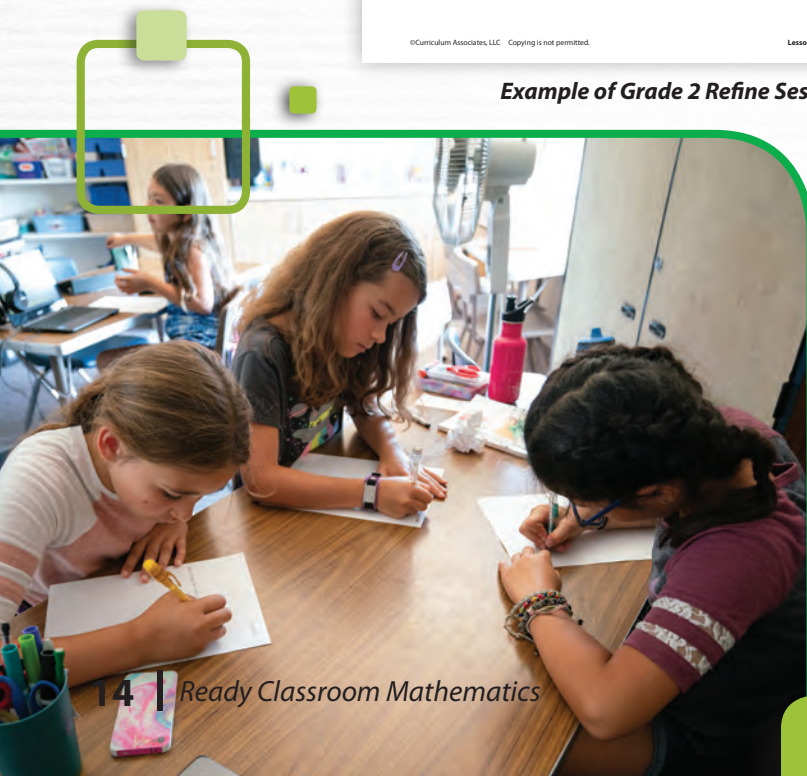
19 Round 307,451 to each place value given below.

to the nearest thousand: \_\_\_\_\_

to the nearest hundred: \_\_\_\_\_

to the nearest ten: \_\_\_\_\_

**Fluency and Skills Practice:** Optional targeted practice uses patterns and repeated reasoning to build mathematics skills. Available for download on the Teacher Toolbox.



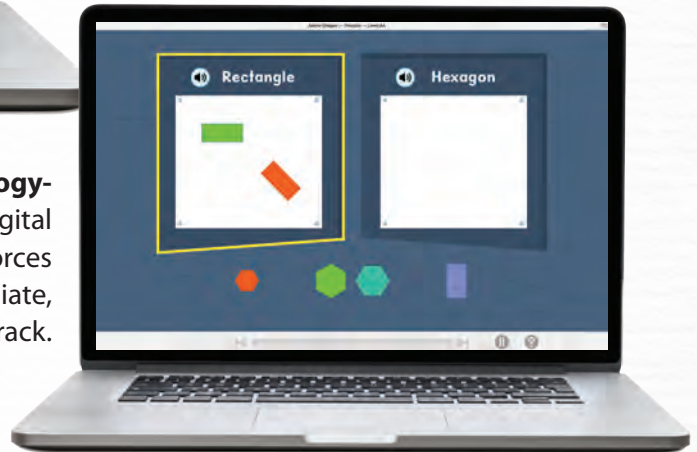


**Coming in 2020! Cumulative Practice:**  
Students revisit previously learned content to deepen their understanding and retention.



**Learning Games:** Playful fluency practice allows students to explore essential skills in a low-stakes environment. In-depth reports offer real-time snapshots of skills progress and growth mindset. Students can toggle to play games in Spanish.

**Interactive Practice with Technology-Enhanced Items:** This assignable digital resource provides practice that reinforces understanding. Students receive immediate, meaningful feedback to keep them on track.



### Fluency Practice

#### Practice using a number path to count on.

**Materials** For each child: Activity Sheet *Number Paths*

- Distribute Activity Sheet *Number Paths*. Tell children they are going to use the number paths to model counting on to solve problems.
- Write  $5 + 2 =$  on the board.
- Have children shade the squares 1–5 on the number path. Then have them circle the 5 and draw a curved arrow from 5 to 6 and from 6 to 7. Make sure children notice that the two jumps represent counting on two.
- Write 4 more equations on the board with a blank for the sum. Ask children to model the addition on the number paths in a similar manner and tell the sum.

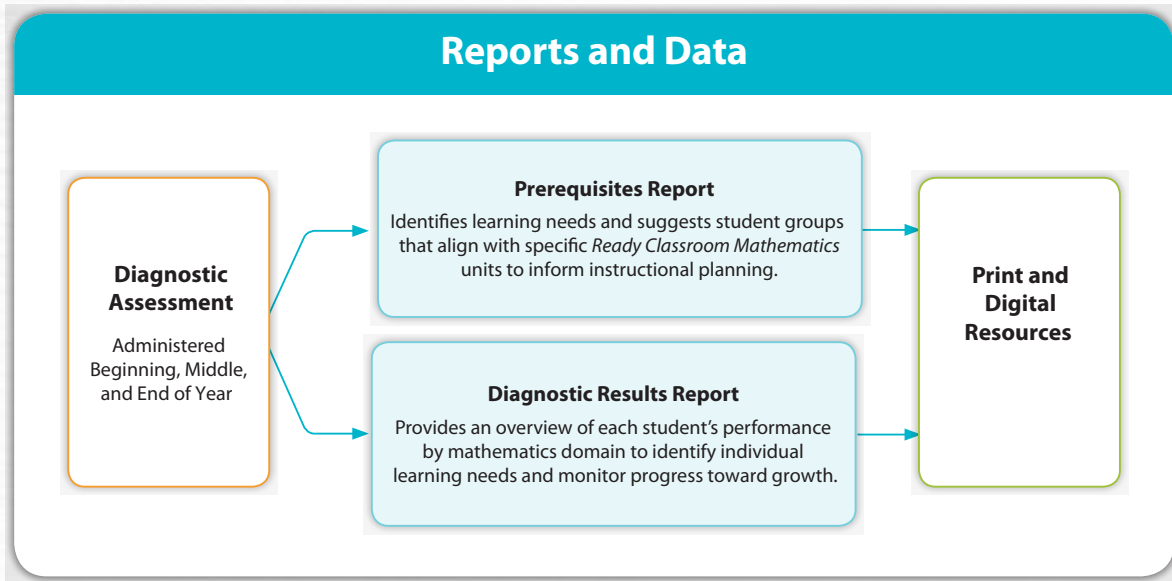
**Fluency Practice:** Build the foundations for counting and cardinality with fun fluency activities in the Teacher's Guide: Fluency Practice (Grades K–1) and Building Fluency (Grade K).



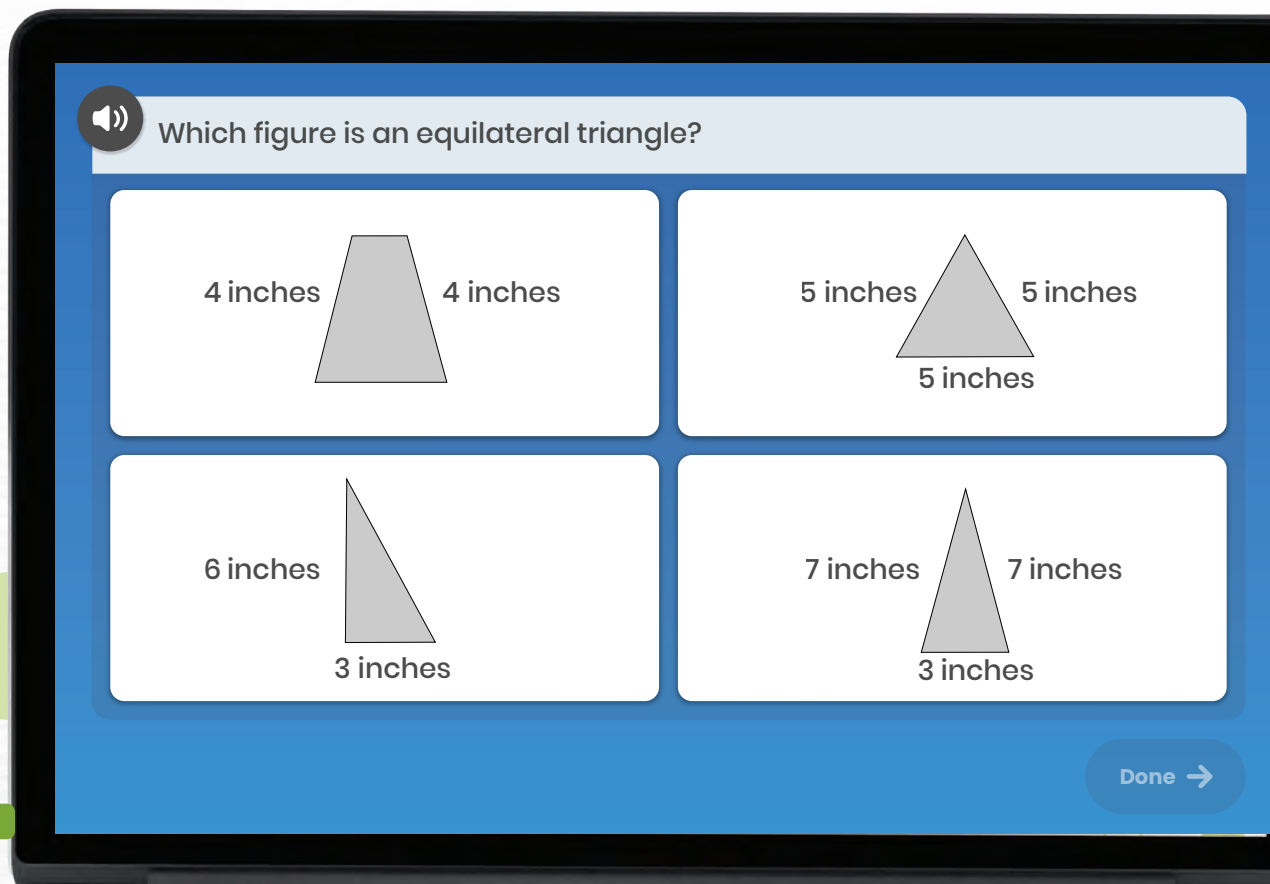
**Grade Level Games:** Fun mathematics games for Grades K–2 students that help build fluency and understanding of critical concepts.

# Better Understand Your Students

Students come with a wide range of backgrounds and experiences. *Ready Classroom Mathematics* provides teachers with deeper knowledge of students' needs. Make informed instructional decisions for every student based on valid, reliable data.



**Diagnostic:** An adaptive digital assessment that provides comprehensive insight into student learning and growth across all K–12 skills to help teachers meet the needs of all students.







**Diagnostic Results:**  
See a comprehensive picture of class instructional needs.

**Diagnostic Results**

Subject: Math | Class/Report Group: Grade 5, Section 1 | Date Range: Diagnostic 1 (09/14/18) | Placement Definition: Standard View

Overall Placement: Showing All Students

Placement by Domain\*

Number and Operations (NO) | Algebra and Algebraic Thinking (ALG) | Measurement and Data (MS) | Geometry (GEO)

\*Students not completed are not included

Showing 20 of 20

Student Name	Scale Score	Overall Placement	NO	ALG	MS	GEO	Typical Growth	Stretch Growth	Date
Tan, Melanie	517	Mid 5	Late 5	Grade 3	Late 5	Mid 5	14	20	09/14/18
Sanchez, Abby	516	Mid 5	Late 5	Mid 5	Grade 3	Early 5	14	20	09/14/18
Stanton, Geena	512	Mid 5	Early 5						
Warren, Santino	491	Early 5	Mid 5						
McDonald, Kal	489	Early 5	Early 5						
Ramirez, Gabriella	472	Grade 4	Grade 4						
Bowers, Tara	472	Grade 4	Grade 4						

See the Digital Assessments Reports Sampler for sample reports.

**Prerequisites Report:**  
Use data to focus teacher time and effort on the prerequisite standards most critical for grade-level success.

**Prerequisites**

Subject: Math | Class/Report Group: Grade 5, Section 1 | Grade: Grade 5 | Unit: Unit 3 (Lessons 18-20)

**Unit 3: More Decimals and Fractions: Multiplication and Division**

In Lessons 18–20 of this unit, students build on their understanding of division as equal sharing as they learn to think of a fraction as a way to represent division, where the numerator is divided by the denominator. Students then extend their understanding of multiplying a fraction by a whole number to multiplying fractions by fractions and whole numbers by fractions, using various models including number lines and area models.

Major Themes of Unit

Prerequisite Skills	Unit Group A 3 Students	Unit Group B 3 Students	Unit Group C 7 Students	Unit Group D 6 Students
Understand division as equal sharing.	✓	✓	Additional Support	Additional Support
Understand and model fractions as part of a whole.	✓	✓	✓	In-depth Review
Multiply length by width to find area.	✓	Additional Support	In-depth Review	In-depth Review
Understand multiplicative comparison.	✓	Additional Support	In-depth Review	In-depth Review
<b>Essential Skill</b> Multiply a fraction by a whole number.	✓	Additional Support	In-depth Review	In-depth Review
	Tan, Melanie Vo, Isaiah McDonald, Kal	Stanton, Geena Warren, Santino Patel, Mia	Baker, Danielle Bowers, Tara Hess, Michael Powell, Elijah Ramirez, Gabriella Ruiz, Justin Singh, Brian	Choi, Isabelle Cochran, Damon Lowe, Noah Malone, Carla Sanchez, Abby Simmons, Tristan

# Actionable Insights

Ready Classroom Mathematics builds informal and formal assessment opportunities into the lesson with suggestions for real-time differentiation. Reports are in-depth, yet intuitive, making it easy to plan the next steps for instruction.

## Close: Exit Ticket

### 9 MATH JOURNAL

Student responses should include a word problem with 12 as the number of wholes to be shared and 5 as the number of equal shares. Students should explain that the quotient  $12 \div 5$  can be represented by the fraction  $\frac{12}{5}$ .

**Error Alert** If students reverse the numerator and denominator in the fraction quotient, then have them use reasoning to determine which two whole numbers the quotient of  $12 \div 5$  falls between and assess which of the two possible fractions,  $\frac{12}{5}$  or  $\frac{5}{12}$ , is between those two numbers.

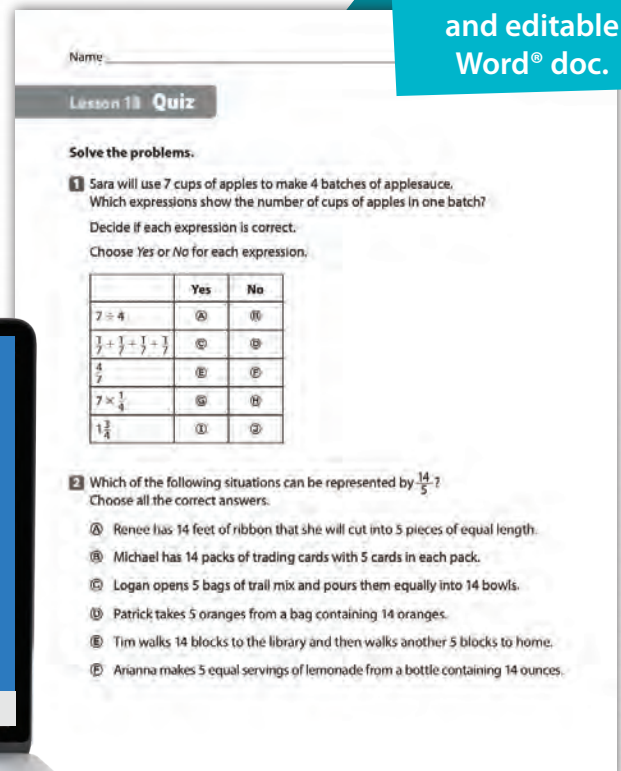
**Informal Assessments:** There are multiple opportunities to observe student understanding.

- Try It
- Discuss It
- Pair/Share
- Ask/Listen-For
- Common Misconceptions
- Error Alert
- Reflect
- Connect It
- Apply It
- Support Whole Group/ Partner Discussion
- Close: Exit Ticket/Math Journal

**Formal Assessments:** Evaluate student understanding and monitor progress toward learning benchmarks and goals.

- Lesson Quizzes
- Mid-Unit and Unit Assessments
- Digital Comprehension Checks: Lesson, Mid-Unit, and Unit

Available as PDF and editable Word® doc.

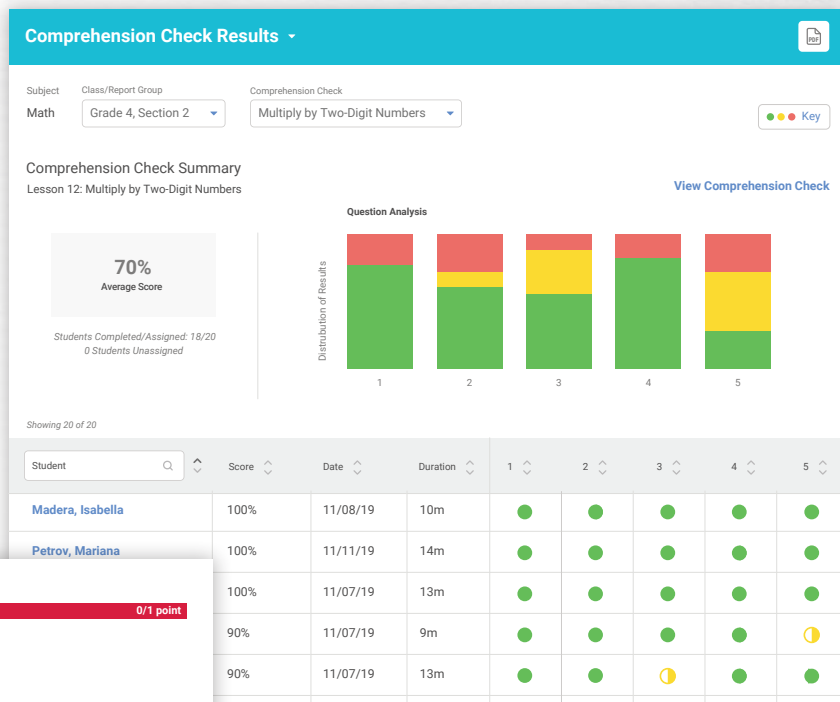


Customizable digital assessments!



## Comprehension Check Reports:

- Monitor student understanding of concepts and skills at the lesson and unit level with auto-scored assessments
- Identify common misconceptions and errors as well as common strengths among student understanding



**Item 1** 0/1 point

The picture shows a rectangular prism that Katie built.

Complete the statement to determine how many unit cubes Katie used to build the prism.  
Enter your answer in the boxes.

This prism has 2 layers and  8 × unit cubes in each layer, so the prism has  16 × unit cubes.

Correct answers:  16  32

Students may have an incorrect response because they do not understand how to find the number of cubes in a layer, or the total number of cubes in a rectangular prism made of unit cubes.

Students who answered 8 unit cubes in each layer and 16 cubes in the prism may have counted the number of horizontal layers correctly but then used the number of cubes on the front instead of the top surface of the prism to find the number of cubes per layer.

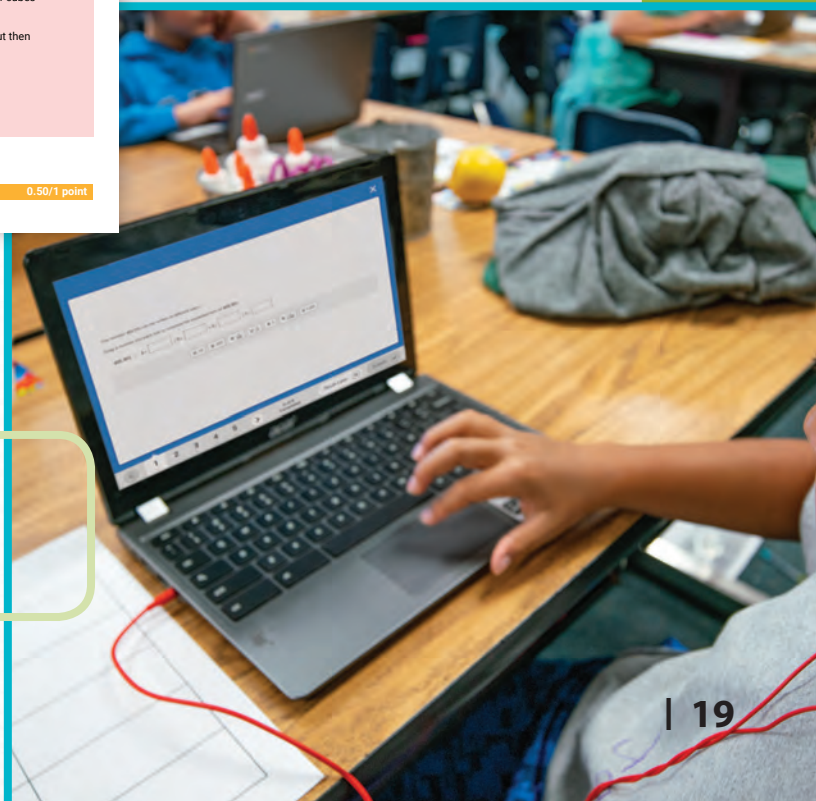
Students who answered 4 unit cubes in each layer and 8 cubes in the prism may have counted the cubes from left to right to find the number of cubes per layer.

Student who answered 16 unit cubes in each layer and 16 cubes in the prism likely did not take into account that there are two layers.

**Item 2** 0.50/1 point

The number 402.301 can be written in different ways.

**Response Analysis:** Get insight into common student errors and misconceptions, making it easier to address incorrect answers.



## Get Differentiation Right

Effective differentiation requires a thoughtful approach. *Ready Classroom Mathematics* integrates the Multitiered System of Support framework with a focus on prevention. With insightful data and purposeful resources, teachers have what they need, when they need it.

### Before the Lesson

Using the data from the Prerequisites reports, teachers can provide review of and intervention for critical topics and connect to specific differentiation resources, including:

- **Prerequisite Lessons** and **Interactive Tutorials** that help to close learning gaps for struggling students
- **Teacher Toolbox** that provides access to all K–8 resources to support whole class instruction and small group differentiation



Example of a Prerequisite Interactive Tutorial



## During the Lesson

- **Common Misconceptions** are highlighted in red with suggestions on how to address them.
- **Hands-On Activities**, strategically placed at critical points of the lesson, provide *if/then* suggestions to guide instruction.
- **Deepen Understanding** provides an in-depth exploration of a targeted mathematical practice related directly to the concepts of the lesson.
- **Refine sessions** provide dedicated instructional time and activities for differentiated instruction.



### Hands-On Activity

Explore different area models showing fourths and eighths.

**If . . .** students struggle with seeing how different models can model the same fractions,

**Then . . .** use this activity to let them explore different ways to divide a shape into equal parts.

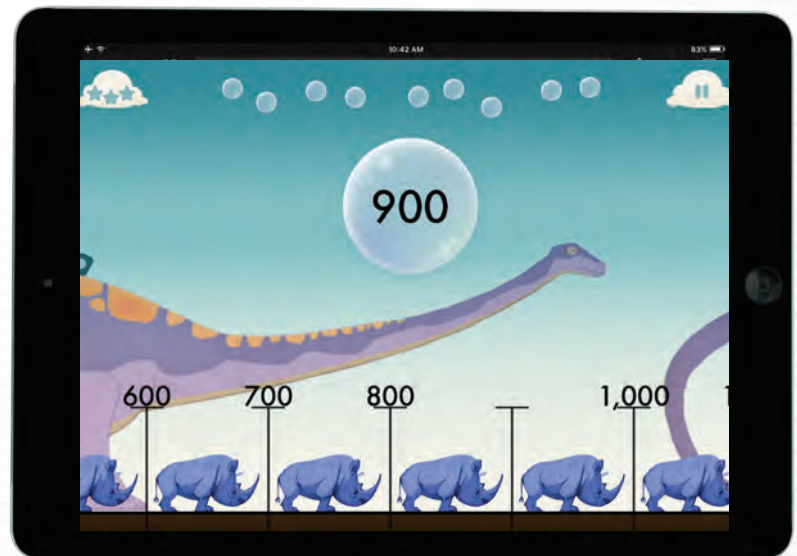
**Materials** For each student: colored pencils, Activity Sheet 1-Inch Grid Paper

- Have students record on the board all the different models they drew to show  $\frac{2}{8} = \frac{1}{4}$ .
- Encourage them to think of additional ways they can show fourths and eighths on a single model. For example, students may have drawn a rectangle with three vertical lines to mark fourths and one dashed horizontal line to show eighths. Another way to show this is to use dashed vertical lines to show eighths, or to outline fourths with one color and outline eighths with another color.
- Have students draw a square on the grid paper and see how many ways they can divide it into fourths and then into eighths.

Example of a Hands-On Activity

## After the Lesson

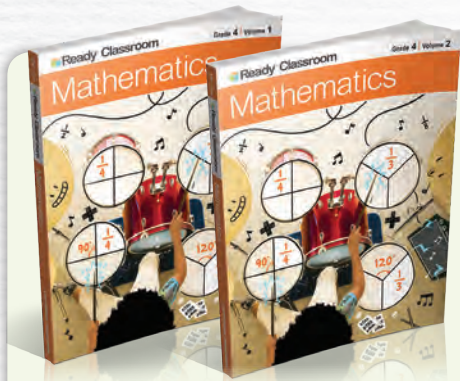
- **Differentiation** options for each lesson let teachers reteach, reinforce, and extend learning to meet the needs of all students.
- **Tools for Instruction** are mini-lessons for reteaching lesson concepts.
- **Math Center Activities** are purposefully designed for on-, below-, and above-level students.
- **Enrichment Activities** challenge students with higher-order thinking tasks.
- **Learning Games** offer fun, challenging, and personalized practice and help students develop a growth mindset.



Example of a Learning Game

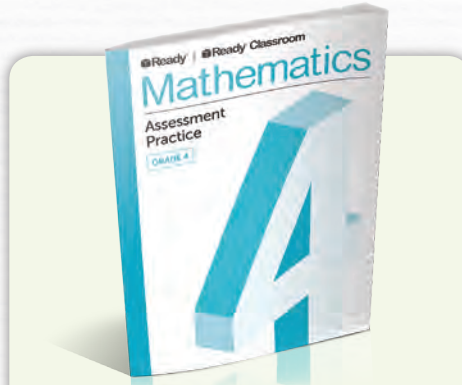
# Program Components

## Student Materials



### Student Worktext E/S

Students take ownership of the learning as they work through the rich tasks and practice new skills in each lesson.



### Assessment Practice Book E/S

A series of standards-aligned practice assessments.

*Available in print and downloadable in English and Spanish from the Teacher Toolbox.*



### Hands-On Materials

Engage students in hands-on learning.

*(Available at Hand2Mind.com)*



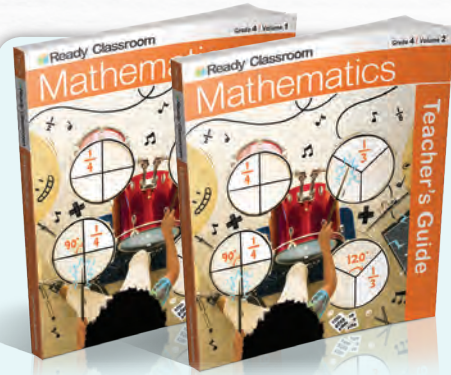
### Student Digital Experience

Student Bookshelf provides online access to the print Student Worktext along with many additional digital features, including:

- E/S **Family Resources**, such as a Family Letter for every lesson and the Unit Flow and Progression Videos
- **Accessibility features**, such as notetaking, text-to-speech, highlighting, and a calculator
- **Multilingual Glossary** available in nine languages
- **Student Handbook** with a guide to the Standards for Mathematical Practice, a mathematical language reference tool, and 100 Mathematical Discourse Questions
- **Digital Math Tools** allow students to use virtual representations of a variety of models.
- E/S **Interactive Learning Games** develop conceptual understanding, improve fluency, and develop a positive relationship to challenge.
- **Interactive Practice** helps students build procedural fluency and skill by providing immediate, conditional feedback.



# Teacher Materials



## Teacher's Guide E/S

Two volumes include discourse-based instructional support, math background, and embedded professional learning.

Available in print and online.



## Discourse Cards and Cube E/S

These resources provide a question or a sentence starter to get students talking about mathematics.

Available in print and online.



## Ready Classroom Central

Online teacher portal with on-demand access to tips and resources for a successful implementation.



## Teacher Digital Experience

Teacher Toolbox provides access to all K–8 resources in one convenient location. A few highlights include:

- Interactive Tutorials
- Digital Math Tools
- E/S Lesson PowerPoint® Slides
- E/S Fluency and Skills Practice
- E/S Center Activities
- E/S Enrichment Activities
- E/S Assessment Resources
- E/S Unit Flow and Progression Videos
- E/S Literacy Connections
- E/S Games

### Assignable Practice Resources:

- E/S Learning Games
- Interactive Practice

### Digital Assessments:

- E/S Diagnostic
- Comprehension Checks

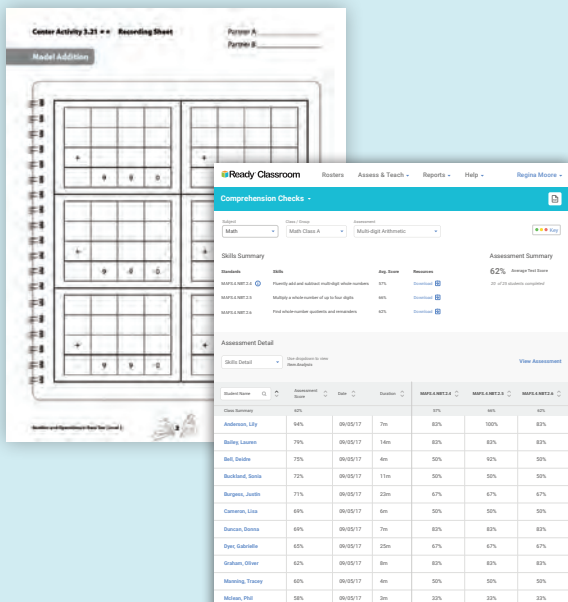
### Reports:

- Diagnostic Results
- Comprehension Check Results
- Prerequisites
- Learning Games

### Optional Add-On:

- *i-Ready* Online Instruction

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