

Grades

K-5

# i-Ready® Classroom Mathematics

## Program Overview



# Making Classrooms Better Places for Teachers and Students

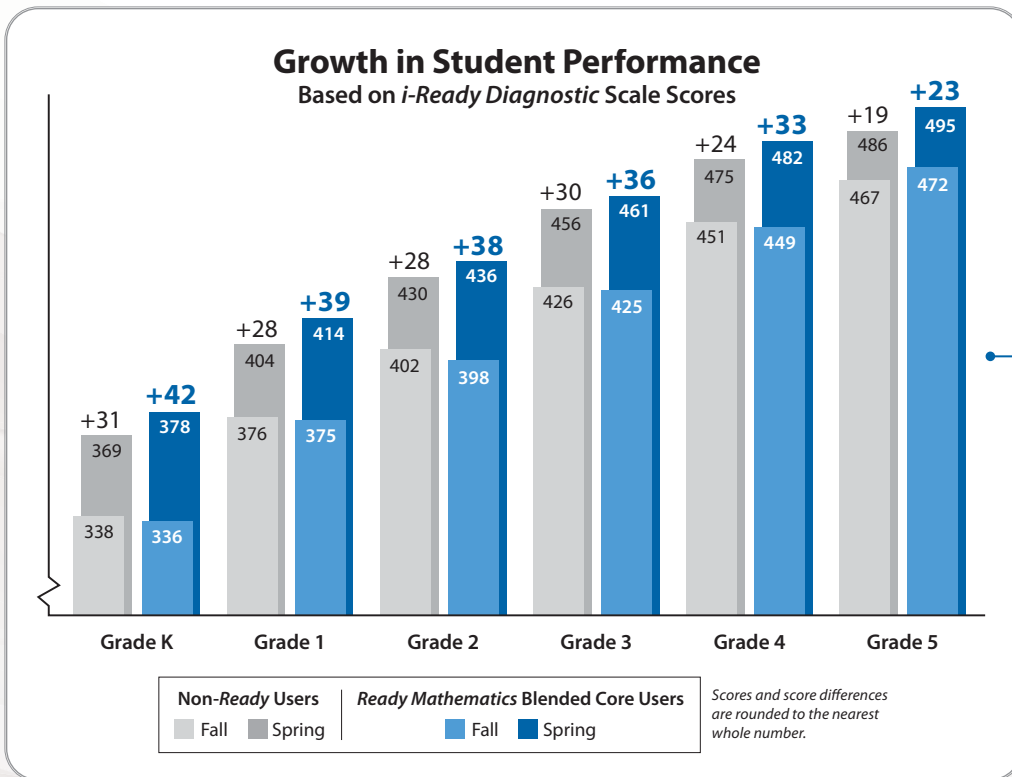
We believe that all students can learn grade-level mathematics given the right access and support. *i-Ready Classroom Mathematics* takes a **unique, yet proven approach that builds upon research-based practices that get results.**

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.



## Built on a Proven Program

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



Third-party research showed that 9,000 students from 32 schools in three states using the blended *i-Ready* and *Ready Mathematics* curriculum significantly out performed 12,000 comparable students without it.

Read the full report:  
[CurriculumAssociates.com/Ready-Math-Blended-ESSA](https://CurriculumAssociates.com/Ready-Math-Blended-ESSA)

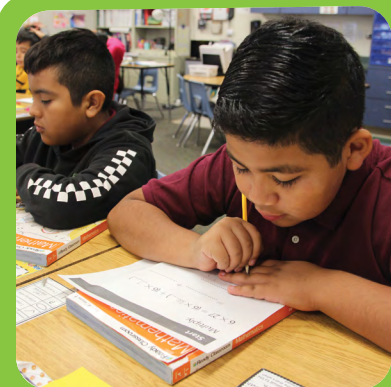




## Students Take Ownership of Their Learning

Invite students to be active participants in math class, and help them become independent mathematical thinkers.

**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.

**Page 13**



## Teachers Use Data to Differentiate Instruction

When differentiation is used in service of mastering grade-level standards, it enables students to reach their greatest potential.

**Page 16**

**For a full list of program components available  
in English and Spanish, see page 22.**



# Designed to Deliver Powerful Results

Teachers have a lot to do when it comes to addressing the standards. Everything in *i-Ready Classroom Mathematics* optimizes instructional time while deepening student understanding.

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 Toolkit**

- 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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## High-Ceiling/Low-Threshold Tasks

These tasks allow students to naturally engage in the mathematical practices in a meaningful way.

### 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.

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

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.

**5 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.

.....

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# 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.

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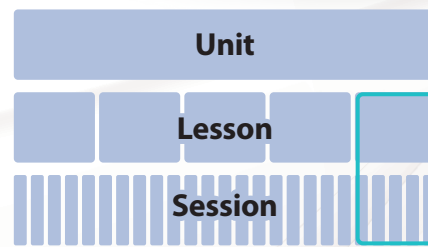
**Math in Action Use Fractions** ..... 572

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# 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 *i-Ready Classroom Mathematics* span multiple days. Lessons are divided into Explore, Develop, and Refine sessions.



**Structure of a Lesson**

Day 1	Day 2	Day 3	Day 4	Day 5
<b>Explore Session</b>	<b>Develop Session</b>	<b>Develop Session</b>	<b>Develop Session</b>	<b>Refine Session</b>
Make connections to prior knowledge and explore new concepts.	Develop strategies and understanding through discourse, problem solving, differentiated instruction, and practice.			Practice, deepen understanding, 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

Each lesson starts with an Explore session. This instructional day helps students connect prior learning to the new concepts in 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 ● ○ ○ ○ ○

**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.

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

**Try It**

**Math Toolkit**

- counters

**SCHOOL BUS**

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### Access for All

Rich tasks provide multiple entry points to engage individual students' prior knowledge and address unfinished learning.

### 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.

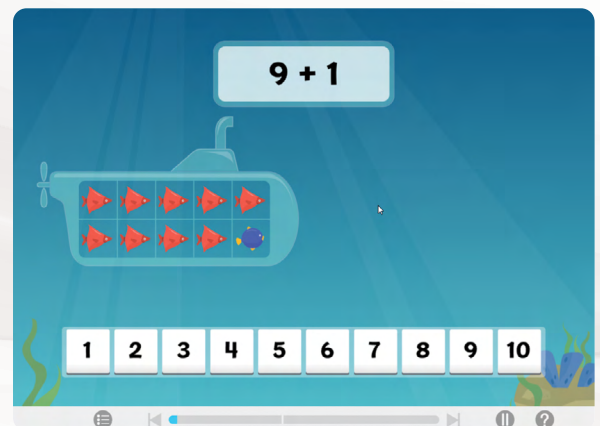
### Honoring Play

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.







# 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.

- 1 How many thirds of a hallway are there to decorate in 5 hallways? ..... thirds
- 2 How many thirds of a hallway will each student decorate? ..... thirds  
Write this as a fraction. .... of a hallway
- 3 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.

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

## Refine Session: Differentiated Instruction and Practice Options

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

## 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 Try–Discuss–Connect routine in *i-Ready Classroom Mathematics* centers around student-generated solutions and meaningful partner and whole class discussions that engage students and help them become independent learners.

Get students doing what they already love—talking. But this time they're talking about mathematics!

**LESSON 12**  
**Develop** Multiplying by Two-Digit Numbers

**SESSION 2** ● ● ● ○

Read and try to solve the problem below.

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?

**TRY IT**

**Math Toolkit**

- base-ten blocks
- grid paper
- multiplication models

**DISCUSS IT**

**Ask your partner:** Why did you choose that strategy?

**Tell your partner:** A model I used was ... It helped me ...

Lesson 12 Multiply by Two-Digit Numbers **257**

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### Try It

The teacher introduces a rich task and helps students make sense of the problem.

Students have time to plan and solve the problem using the tools and strategies that make sense to them.

### Discuss It

Students talk with a partner to share strategies and practice vocabulary. During the partner discussions, the teacher monitors and asks clarifying questions.

Selected students share their work with the class in a way that builds conceptual understanding.

Example of Grade 4 Try It and Discuss It





After the class fully explores a variety of solution methods, a model or example is presented to enhance students' understanding.

## Connect It

Students complete questions that promote deeper connections. Then they apply their understanding to new problems.

### LESSON 12 DEVELOP

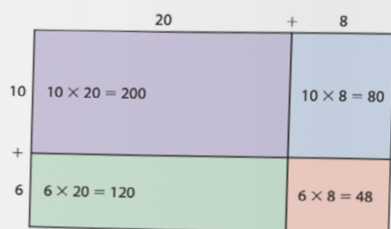
Explore different ways to understand multiplying a two-digit number by a two-digit number.

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.



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

### MODEL IT

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

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



### 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.

.....

.....

.....

### Example of Grade 4 Connect It

## What does this look like in the classroom?

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

# Integrate Language and Mathematics

Build academic language and content knowledge at the same time. The Try–Discuss–Connect routine allows for multiple solution strategies and helps students make sense of problems through academic discourse. *i-Ready Classroom Mathematics* also includes targeted support to help build academic English for all.

## Vocabulary Development

Every lesson includes:

- Vocabulary graphic organizer
- Teacher support to help students review previously learned mathematics concepts and vocabulary they will build on during the lesson

1 Think about what you know about multiplication. Fill in each box. Use words, numbers, and pictures. Show as many ideas as you can.

What Is It?	What I Know About It
Examples	Examples

### Develop Language

**Why** Clarify the meaning of the term *row*.

**How** Explain to students that the word *row* can be a straight line of people or things that are next to one another. Remind students that they line up in a row, or straight line, one after another, when they go to the cafeteria or library. Ask students to give real-world examples of rows they may see at home or in school. Have students close their eyes and visualize rows of chairs in a school auditorium or cafeteria and then describe to partners what they see in their mental images.

**Solutions**  
Students may use any method to solve the multiplication problem.  $16 \times 12 = 192$   
*Basic*

- 4 Have students solve the problem another way to check their answer.

Check your answer. Show your work.

Possible student work:

	10	+	6	
10	$10 \times 10 = 100$		$10 \times 6 = 60$	
2	$2 \times 10 = 20$		$2 \times 6 = 12$	
$100 + 60 + 20 + 12 = 100 + 80 + 12$				
$= 100 + 92$				
$= 192$				
$16 \times 12 = 192$				

256

**ELL** English Language Learners: Differentiated Instruction Prepare for Session 2 Use with *Connect It*.

**Levels 1–3**  
**Reading/Writing** Read *Connect It* problem 6 to students. Ask: *What strategies did you use for multiplying a two-digit number by a two-digit number?* [area model, partial products] Encourage students to confirm their responses by finding examples in **Picture It** and **Model It**. Write student responses and then read them to students. Ask: *Which strategy do you like best for multiplying a two-digit number by a two-digit number?* Provide a sentence frame for students to use for their written responses: *I like using \_\_\_\_\_ to solve the multiplication equations.* Have students form pairs and practice reading their sentences to partners.

**Levels 2–4**  
**Speaking/Writing** Read *Connect It* problem 6 with students. Have students brainstorm strategies used to multiply a two-digit number by a two-digit number. [area model, partial products, other strategies recommended by students] Ask: *How is an area model used to multiply a two-digit number by a two-digit number?* Have students explain their process for finding the product. Ask: *Which strategy do you like best for multiplying a two-digit number by a two-digit number? Why?* Provide a sentence frame: *I like using \_\_\_\_\_ to solve the multiplication equations because \_\_\_\_\_.* Have students use the sentence frame to provide oral responses before writing their responses.

**Levels 3–5**  
**Speaking/Writing** Have students read *Connect It* problem 6 with partners. Ask partners to brainstorm strategies used to multiply a two-digit number by a two-digit number and explain their process for using each strategy. Have partners make T-charts for each strategy with the headings *Advantages* and *Disadvantages*. When partners have completed their T-charts, have them read the information to other partner groups. Encourage them to add information to their T-charts, as needed. Ask: *Which strategy do you like best for multiplying a two-digit number by a two-digit number? Why?* Call on pairs to share their T-charts with the class and to explain their thought process.

## Differentiation for English Learners

These scaffolds are provided every day to support the different proficiency levels in the classroom for both receptive and productive language.





# Help Students See Themselves in the Mathematics

Affirm and validate students' identities using the embedded teacher support in *i-Ready Classroom Mathematics*. Contexts and ideas that a variety of students can relate to help them make better connections to the content.

LESSON 17

## Develop Solving Word Problems to 20

SESSION 2 ● ● ● ● ●

Jenny gets 15 prizes from the piñata.  
Ken gets 6 prizes from the piñata.  
How many fewer prizes does Ken get than Jenny?

**Try It**

**Math Toolkit**

- counters
- connecting cubes
- number paths
- number bonds
- 10-frames

**DISCUSS IT**  
Which subtraction strategy can help solve this problem?

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## Motivate and Engage

Relevant, high-interest scenarios engage students in meaningful mathematics.

## Family Letters

Keep parents in the loop! Each letter includes an activity related to the lesson. Available for every lesson in English, Spanish, Tagalog, Russian, Arabic, Mandarin, Korean, and Vietnamese.

## Add and Subtract Fractions

LESSON 21

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:  $\frac{1}{4}$  and  $\frac{2}{4}$  unlike denominators:  $\frac{1}{4}$  and  $\frac{2}{3}$

To find the sum of fractions with like denominators, understand that you are adding like units. Just as 3 apples plus 2 apples is 5 apples, 3 eighths plus 2 eighths is 5 eighths. Similarly, when you take away, or subtract, 2 eighths from 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 the same way that "apples" names units.

So, when you add two fractions with like denominators, the sum of the numerators tells how many of those units you have.

When you subtract two fractions with like denominators, the difference of the numerators tells how many of those units you have.

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

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## Connect to Community and Cultural Responsiveness

Strategies are provided to increase connections and encourage engagement for all students.

### 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?*

# Teacher Support That Empowers

When teachers have the right support, they feel confident teaching mathematics. *i-Ready Classroom Mathematics* includes professional learning designed to help teachers bring mathematical concepts to life as well as learn effective teaching strategies and best practices.

**UNIT 3 Math Background**

**Models, Progressions, and Teaching Tips**  
As you plan lessons, use this information to unpack the learning progressions and make connections between key concepts.

**Unit Themes**  
The major themes of this unit are:  
 • You can use what you know about place value to multiply multi-digit numbers.  
 • You can use what you know about place value to help you divide.  
 • Units of measurement can be divided into smaller units. Knowing how these units relate to one another will help you convert measurements from the larger unit to the smaller unit.  
 • You can use formulas to find the area and perimeter of rectangles.

**Prior Knowledge**  
Students will build on their preliminary understandings of multiplication and division. They should:  
 • be familiar with rectangular arrays and area models to represent multiplication.  
 • be familiar with the properties of operations.  
 • use their understanding of place value and basic facts to multiply one-digit numbers by multiples of 10.  
 • understand division as a number of equal groups or the number of items in each group.

**UNIT FLOW AND PROGRESSION**

**Watch the video!** See the flow and progression of math concepts in this unit come to life with tips and insights on using models and making connections.

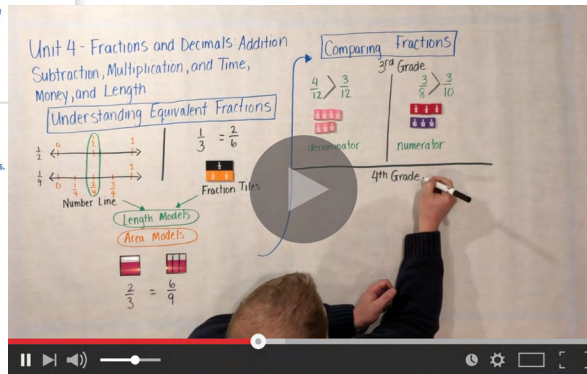
**Multiplying Whole Numbers**

**Insights on: Modeling Multiplication with Base-Ten Blocks**  
 ✓ Students begin to explore ways to use place value and partial products to multiply by one- and two-digit numbers.  
 ✓ When working with partial products, avoid jumping straight to the area model. Allow students to make sense of multiplication using place-value strategies as well as base-ten blocks.  
 ✓ Use different colors for the base-ten 100s, 10s, and 1s. This will allow students to naturally see the area model and then begin drawing the model.

**Base-ten blocks show multiplication concepts.**  
 $100 + 40 + 5$   
 4 hundreds + 16 tens + 20 ones = 580

## Math Background

At the beginning of each unit, the Math Background helps teachers deepen their understanding of mathematical models and strategies, better understand how the models fit into the learning progression, and learn valuable teaching tips.



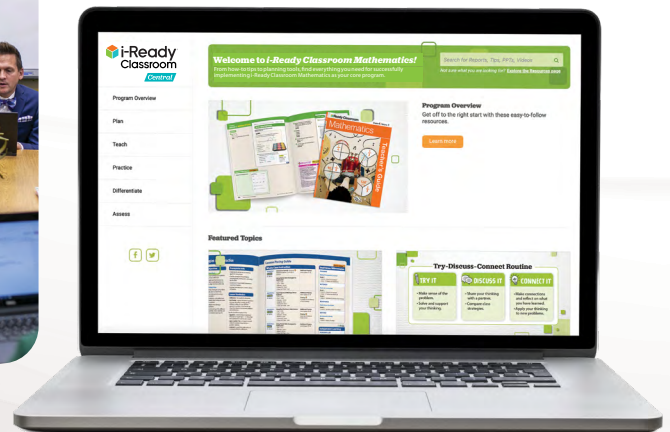
## Unit Flow & Progression Videos

These videos show the progression of concepts in each unit and include ideas for using the models and making connections. Closed-captioned in English and Spanish.

Available for families, too!

## Onsite and Online Professional Development (PD)

Our ongoing, classroom-focused PD supports teachers in using student thinking and the mathematical practices to transform mathematics classrooms.



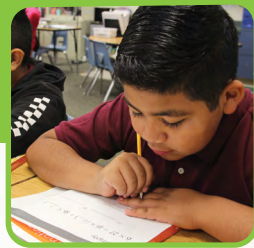
## *i-Ready Classroom Central*

From how-to tips to planning tools, get on-demand access to everything needed for a successful implementation.

## Your Feedback Matters!

We continually grow and enhance our PD resources based upon your needs and opinions.





# High-Quality Independent Practice

Practice needs to build conceptual understanding and match the rigorous expectations of the standards. *i-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.

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

LESSON 23 SESSION 3

### Practice Writing a Whole Number as a Fraction

Study the Example showing different ways to write whole numbers as fractions. Then solve problems 1–13.

**EXAMPLE**

Mrs. Clark cuts 2 same-sized pieces of colored paper into sixths to make strips for paper chains. How many strips does she make?

$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	1 whole = six $\frac{1}{6}$ s
						$1 = \frac{6}{6}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	2 wholes = twelve $\frac{1}{6}$ s
						$2 = \frac{12}{6}$

Each strip is  $\frac{1}{6}$  of a whole piece of paper.  
Mrs. Clark makes 12 strips.

Write the whole numbers as fractions in problems 1–4.

$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
---------------	---------------	---------------	---------------	---------------	---------------

- 1  $1 = \frac{\square}{3}$
- 2  $2 = \frac{\square}{3}$
- 3  $3 = \frac{\square}{3}$
- 4  $4 = \frac{\square}{3}$

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LESSON 23 SESSION 3

Use this number line to solve problems 5–8.

- 5  $1 = \frac{\square}{4}$
- 6  $2 = \frac{\square}{4}$
- 7  $3 = \frac{\square}{4}$
- 8  $0 = \frac{\square}{4}$

Use this number line to solve problems 9–11.

- 9 One whole is equal to ..... eighths.
- 10 16 eighths is equal to ..... wholes.
- 11  $3 = \frac{\square}{8}$
- 12 Use the model below to write a fraction equivalent to 3.  
3 = .....

X

X

X

- 13 Draw a model to show  $2 = \frac{8}{4}$ .

Example of Grade 3 Practice

# 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. *i-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 12** **Refine** Multiplying by Two-Digit Numbers **SESSION 3**

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

**EXAMPLE**  
**What is the product of 73 and 58?**  
 Look at how you could show your work using partial products.

$$\begin{array}{r} 73 \\ \times 58 \\ \hline 584 \\ 3650 \\ \hline 4234 \end{array}$$

73  
 24 → 8 ones × 3 ones  
 560 → 8 ones × 7 tens  
 350 → 5 tens × 3 ones  
 3,500 → 5 tens × 7 tens

**Solution** .....

**APPLY IT**  
 1 Find the product of 15 and 24. Show your work.

The student added the partial products to find  $73 \times 58$ .

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

Should you multiply  $15 \times 24$  or  $24 \times 15$ ?

**PAIR/SHARE**  
 How did you decide which method to use to help you solve the problem?

**Solution** .....

©Curriculum Associates, LLC. Copying is not permitted. Lesson 12 Multiply by Two-Digit Numbers 263

Example of Grade 4 Refine Session

## Fluency and Skills Practice

Optional targeted practice uses patterns and repeated reasoning to build mathematics skills. Available as a student workbook or as PDFs on the Teacher Toolbox.

**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: \_\_\_\_\_

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Example of Grade 4 Fluency and Skills Practice

## Cumulative Practice

Students revisit previously learned content to deepen their understanding and retention. Available for every unit.

**UNIT 2** **Cumulative Practice** Name: \_\_\_\_\_

**Set 1: Place Value**  
 Fill in the blanks to make each statement true.

1 The value of the 4 in 54,298 is .....

2 The value of the 2 in 490,200 is ..... times the value of the 2 in 649,120.

3 In the number 88,845, the value of the 8 in the thousands place is 10 times the value of the 8 in the ..... place.

**Set 2: Read and Write Whole Numbers**  
 Write each number in standard form in problems 1–4.

1 Eight hundred thousand, eight      2 Forty-five thousand, twelve

.....

3  $2,000 + 200 + 2$       4  $10,000 + 800$

.....

**Write the numbers in word form in problems 5 and 6.**

5 20,490 = \_\_\_\_\_

6 48,016 = \_\_\_\_\_

**Set 3: Compare Whole Numbers**  
 Write  $<$ ,  $>$ , or  $=$  in each circle to compare the numbers.

1 15,076  9,628      2 7,648  7,648      3 66,666  666,666

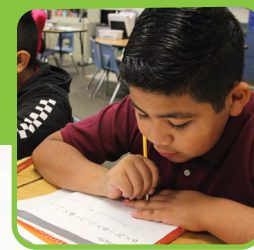
4 11,154  101,114      5 520,605  520,650      6 22,004  21,998

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Example of Grade 4 Cumulative Practice







### 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.

### 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.



### 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

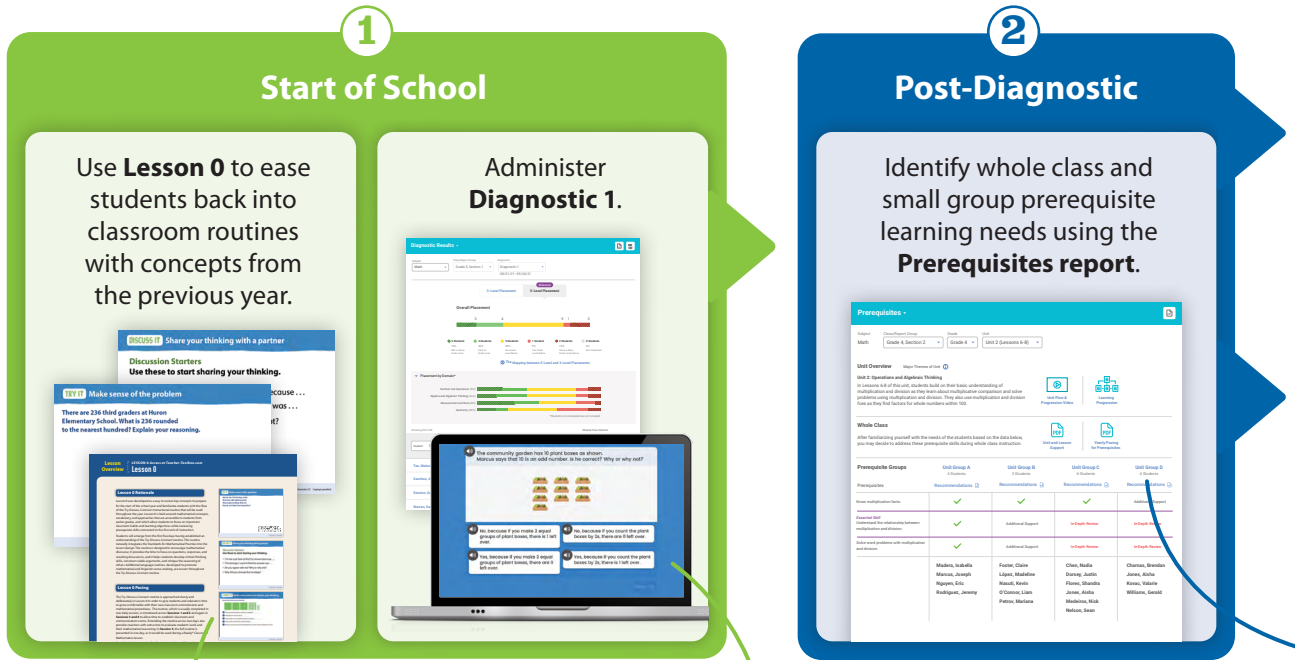
Build the foundations for counting and cardinality with fun fluency activities in the Teacher’s Guide: Fluency Practice (Grades K–1) and Building Fluency (Grade K).

### Grade Level Games

Fun mathematics games for Grades K–2 help students build fluency and understanding of critical concepts.

# Intuitive Data at Your Fingertips

Students come with a wide range of backgrounds, knowledge, and experiences. *i-Ready Classroom Mathematics* helps teachers optimize class time by providing deep knowledge of students' learning needs and guidance to address unfinished learning.



## Lesson 0

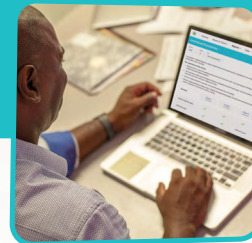
Build a community of learners by introducing students to the **Try-Discuss-Connect routine**. This discourse-based instructional routine encourages students to persevere in solving problems, make connections between multiple strategies, and learn from each other.

*See pages 8–9 for more about the routine.*



## Diagnostic

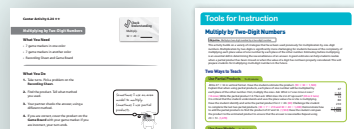
Administer this adaptive digital assessment to gain comprehensive insight into student learning and growth across all K–12 skills and meet the needs of all students.



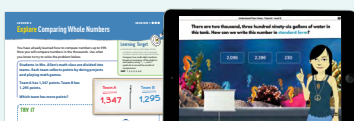
3

## Recommended Guidance and Resources

### Small Group Recommended Resources



### Whole Class Prerequisite Lessons, Guidance, and Support



4

## Instruction

### Small Group Instruction



### Whole Class Instruction



## Prerequisites Report

Use the Prerequisites report to address unfinished learning, either during small group instruction or whole class instruction, depending on the needs of the class.

### Learning Progression

Understand the coherence of standards across previous grade levels to help uncover and address students' unfinished learning.

### Whole Class Instruction

Use this pacing and guidance to adjust lesson plans to address prerequisites during whole class instruction when most students have similar learning needs.

- Teach Prerequisite Lessons.
- Consolidate other lessons in the unit.
- Use on-the-spot prerequisite support during grade-level instruction.

### Small Group Instruction

Strategically pace the recommended resources throughout the unit with small groups of students to address their similar learning needs.

**Prerequisites**

Subject: Math | Class/Report Group: Grade 4, Section 2 | Grade: Grade 4 | Unit: Unit 2 (Lessons 6-8)

**Unit Overview** | Major Themes of Unit

**Unit 2: Operations and Algebraic Thinking**  
 In Lessons 6-8 of this unit, students build on their basic understanding of multiplication and division as they learn about multiplicative comparison and solve problems using multiplication and division. They also use multiplication and division facts as they find factors for whole numbers within 100.

**Whole Class**  
 After familiarizing yourself with the needs of the students based on the data below, you may decide to address these prerequisite skills during whole class instruction.

Prerequisite Groups	Unit Group A 4 Students	Unit Group B 5 Students	Unit Group C 6 Students	Unit Group D 4 Students
Prerequisites	Recommendations	Recommendations	Recommendations	Recommendations
Know multiplication facts.	✓	✓	✓	Additional Support
<b>Essential Skill</b> Understand the relationship between multiplication and division.	✓	Additional Support	In-depth Review	In-depth Review
Solve word problems with multiplication and division.	✓	Additional Support	In-depth Review	In-depth Review
	Madera, Isabella Marcus, Joseph Nguyen, Eric Rodriguez, Jeremy	Foster, Claire López, Madeline Nasuti, Kevin O'Connor, Liam Petrov, Mariana	Chen, Nadia Dorsey, Justin Flores, Shandra Martin, Holly Medeiros, Nick Nelson, Sean	Chamas, Brendan Jones, Aisha Kovac, Valarie Williams, Gerald

See the Digital Assessment Reports Sampler for sample reports.



# Actionable Insights for Flexible Planning

*i-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.

There are multiple opportunities to observe student understanding during the lesson.

- 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

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.

Name \_\_\_\_\_

### Lesson 18 Quiz

Solve the problems.

- 1 Sara will use 7 cups of apples to make 4 batches of applesauce. Which expressions show the number of cups of apples in one batch? Decide if each expression is correct. Choose Yes or No for each expression.

	Yes	No
$7 \div 4$	<input type="radio"/> A	<input type="radio"/> B
$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$	<input type="radio"/> C	<input type="radio"/> D
$\frac{4}{7}$	<input type="radio"/> E	<input type="radio"/> F
$7 \times \frac{1}{4}$	<input type="radio"/> G	<input type="radio"/> H
$1\frac{3}{4}$	<input type="radio"/> I	<input type="radio"/> J

- 2 Which of the following situations can be represented by  $\frac{14}{5}$ ? Choose all the correct answers.

- A Renee has 14 feet of ribbon that she will cut into 5 pieces of equal length.
- B Michael has 14 packs of trading cards with 5 cards in each pack.
- C Logan opens 5 bags of trail mix and pours them equally into 14 bowls.
- D Patrick takes 5 oranges from a bag containing 14 oranges.
- E Tim walks 14 blocks to the library and then walks another 5 blocks to home.
- F Arianna makes 5 equal servings of lemonade from a bottle containing 14 ounces.

Digital Comprehension Checks

Colby says the model below shows  $\frac{1}{5}$  shaded. Lance says the model shows  $\frac{5}{5}$  shaded.

Which sentence explains who is correct?

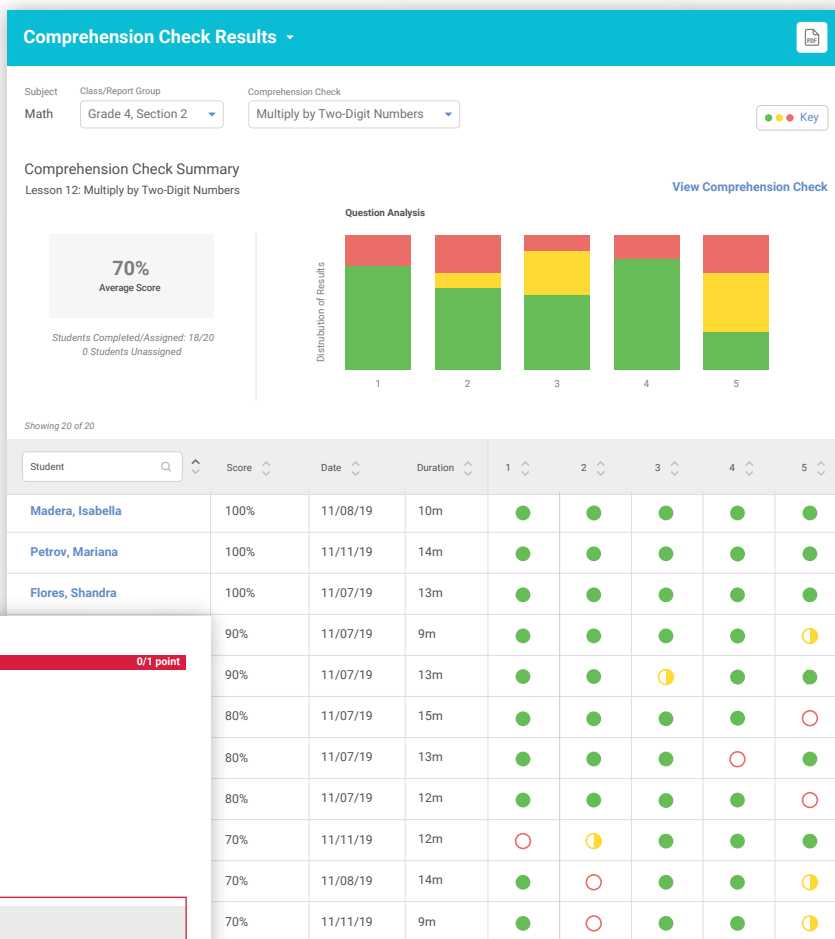
- Colby is correct because the model shows 5 parts, and each part is  $\frac{1}{5}$ .
- Lance is correct because the model shows 1 whole, and  $\frac{5}{5}$  is equal to 1.
- Colby is correct because the model shows 1 whole divided into 5 parts, or  $\frac{1}{5}$ .
- Lance is correct because the model shows 5 wholes divided into 5 parts, or  $\frac{5}{5}$ .

1 2 3 4 5 8 of 8 Completed Finish Later Submit



## Comprehension Check Reports

- Provide insight into student understanding of concepts and skills at the lesson and unit level with auto-scored assessments
- Support teachers in identifying 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

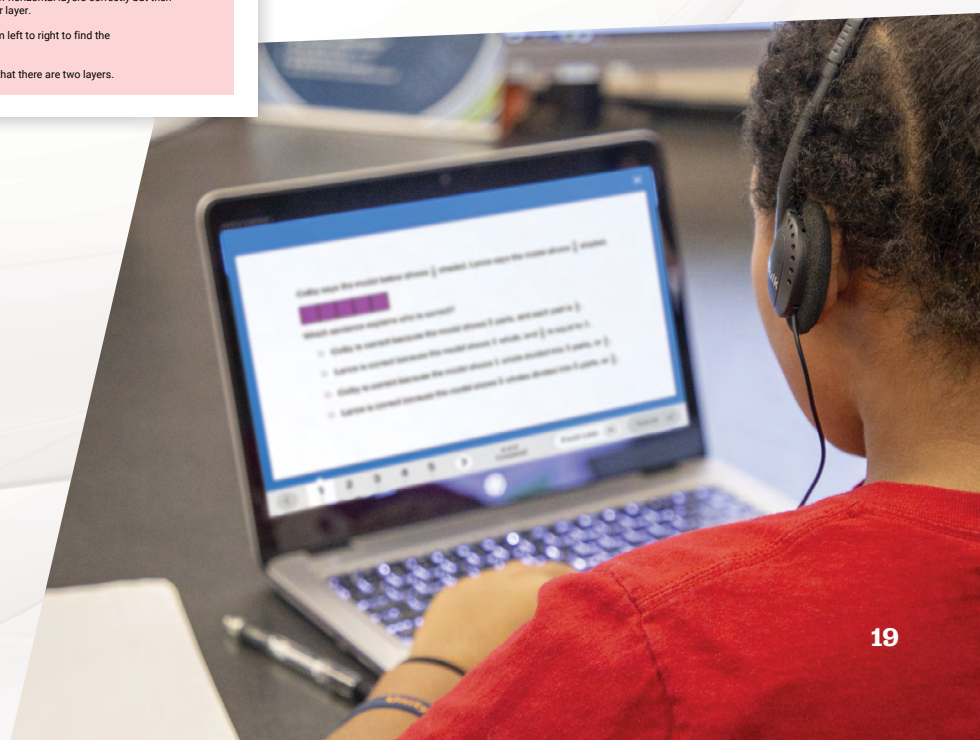
Students may have an incorrect response because they do not understand how to find the number of cubes in a layer, or the total number of cubes in a rectangular prism made of unit cubes.

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.

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





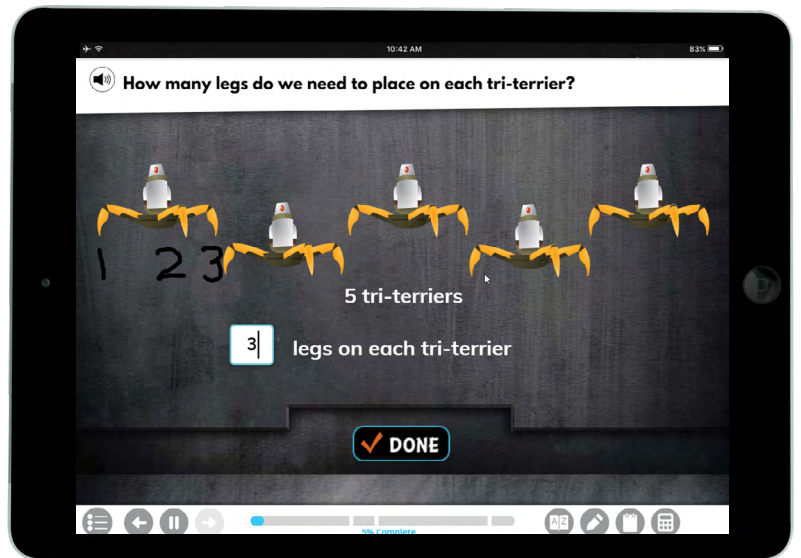
# Differentiation Made Easy

Effective differentiation requires a thoughtful approach. *i-Ready Classroom Mathematics* provides insightful data and purposeful resources so teachers have what they need, when they need it.

## Before the Lesson

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

- **Prerequisite Lessons** and **Interactive Tutorials** that help address unfinished learning
- **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*







Assign student PDFs through any learning management system!

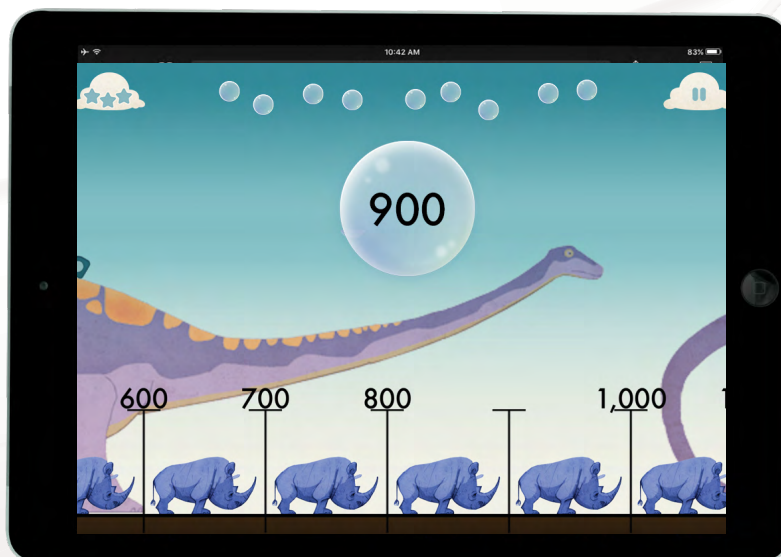
## During the Lesson

- **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.



## After the Lesson

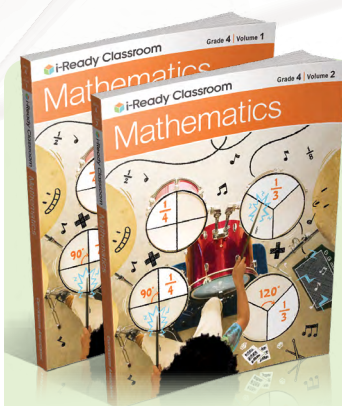
- **Differentiation** options for each lesson let teachers reteach, reinforce, and extend learning to meet the needs of all students.
- **Tools for Instruction** are mini-lessons for reteaching lesson concepts.
- **Develop Session Video Library** offers instructional videos for remote learning, homework support, or reteaching 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*

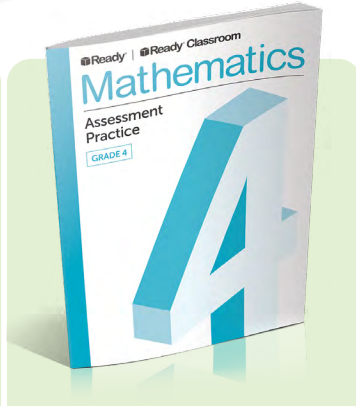
# Program Components

## Student Materials



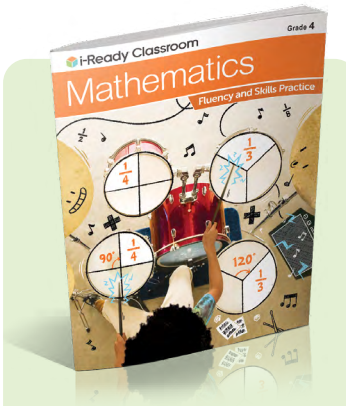
### Student Worktext <sup>E/S</sup>

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



### Assessment Practice Book <sup>E/S</sup>

A series of standards-aligned practice assessments  
Available in print and downloadable in English and Spanish from the Teacher Toolbox



### Fluency and Skills Practice Book

Targeted fluency practice for every lesson.  
Included on the Teacher Toolbox and available in print for additional purchase



### Hands-On Materials

Engage students in hands-on learning.

Available at:  
[Hand2Mind.com/](http://Hand2Mind.com/)  
[Curriculum-Associates](http://Curriculum-Associates.com)

## Student Digital Experience

The Student Digital Experience, accessible through [i-ReadyConnect.com](http://i-ReadyConnect.com), provides access to all student components of *i-Ready Classroom Mathematics*.

**Student Bookshelf** provides online access to student resources, including:

- **Digital Student Worktext <sup>E/S</sup>**  
Includes tools, such as note-taking text-to-speech, highlighting, and a calculator
- **Family Resources <sup>E/S</sup>**
  - Family Letter for every lesson
  - Unit Flow & Progression Videos
- **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
- **Develop Session Video Library** offers instructional videos for remote learning, homework support, or reteaching concepts.

### Digital Math Tools

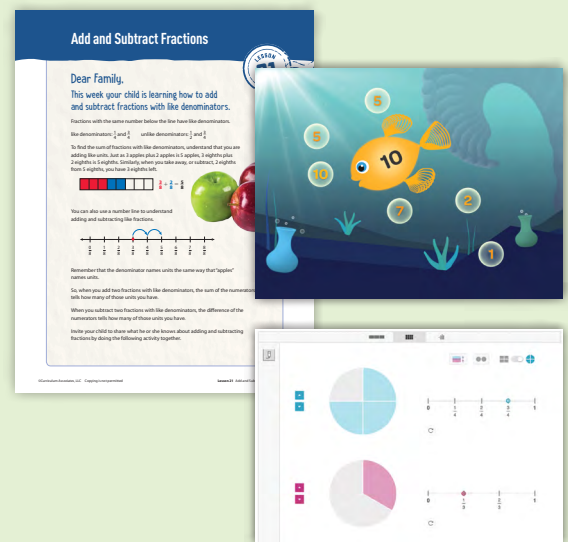
Provide virtual representations of various models.

### Interactive Learning Games <sup>E/S</sup>

Develop conceptual understanding, improve fluency, and develop a positive relationship to challenge.

### Interactive Practice

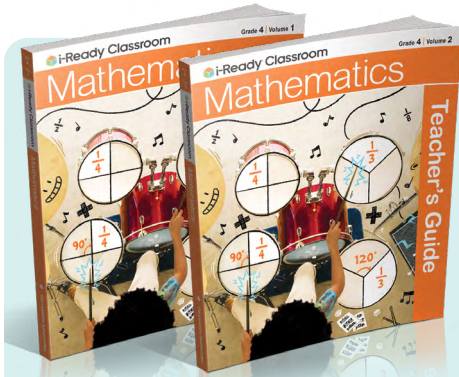
Helps students build procedural fluency and skill by providing immediate, meaningful feedback



**E/S** = Available in English/Spanish



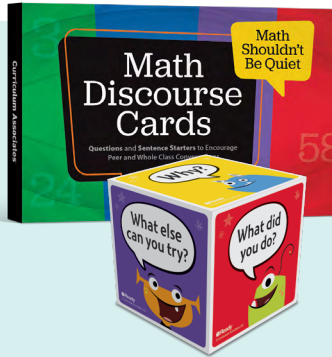
# Teacher Materials



## 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



## i-Ready Classroom Central

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

# Teacher Digital Experience

The Teacher Digital Experience, accessible through [i-ReadyConnect.com](https://i-ReadyConnect.com), provides access to all teacher components of *i-Ready Classroom Mathematics*.

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

- Interactive Tutorials\*
- Digital Math Tools
- 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 & Progression Videos\*\*
- Literacy Connections E/S
- Grade Level Games (K–2) E/S
- Unit Games E/S
- Develop Session Video Library

\*Grades K–3 available in Spanish. Grades 4–5 available in Spanish in 2022.

\*\*Closed-captioned in English and Spanish

## Assignable Practice Resources

- Learning Games E/S
- Interactive Practice

## Digital Assessments

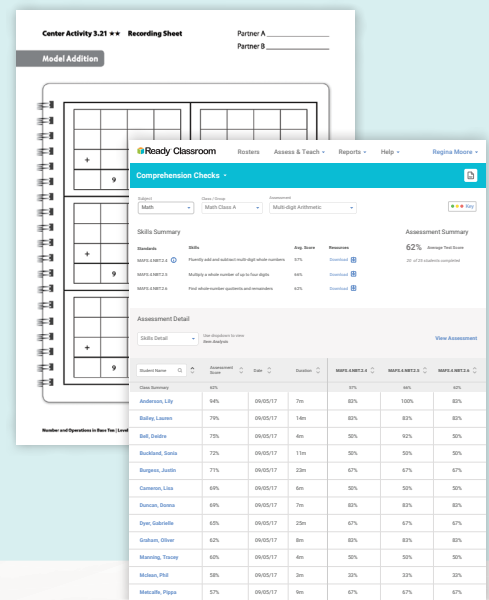
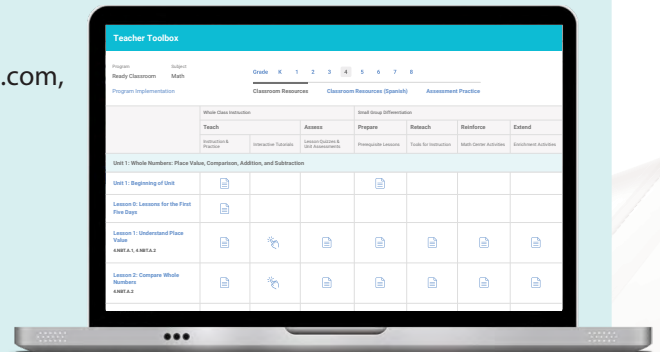
- Diagnostic E/S
- Comprehension Checks E/S

## Reports

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

## Optional Add-On

- *i-Ready Personalized Instruction*





# i-Ready® Classroom Mathematics

Grades  
K-5

To see how other educators are maximizing their  
*i-Ready* experience, follow us on social media!



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