TCM Teacher Created Materials

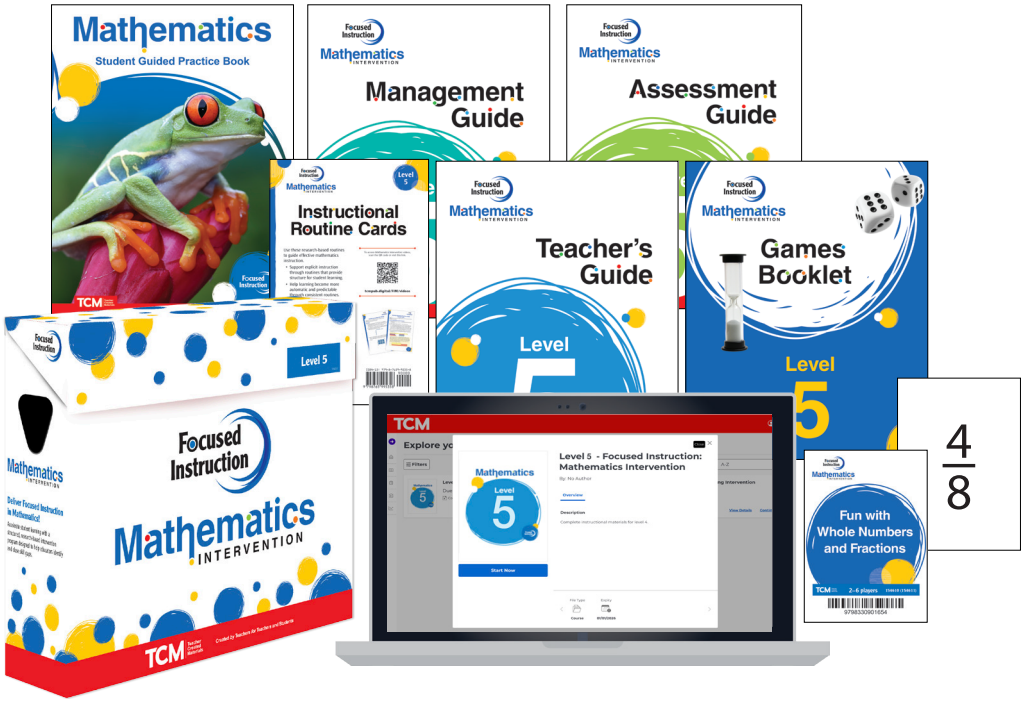
Focused Instruction

Mathematics INTERVENTION

Lessons and Activities

Level 5

Table of Contents



tcmpub.com | 800.858.7339

153342s

Focused Instruction

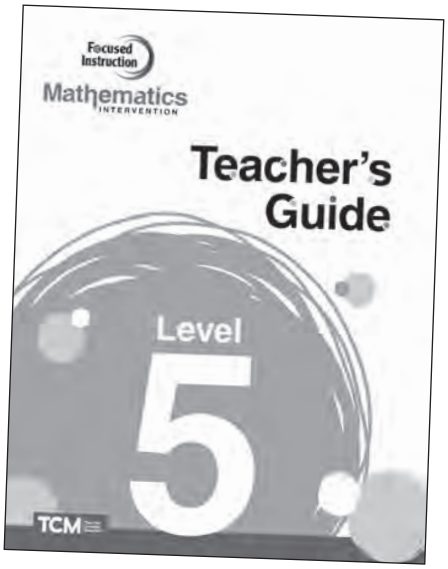
Mathematics INTERVENTION

Management Guide

Level 5

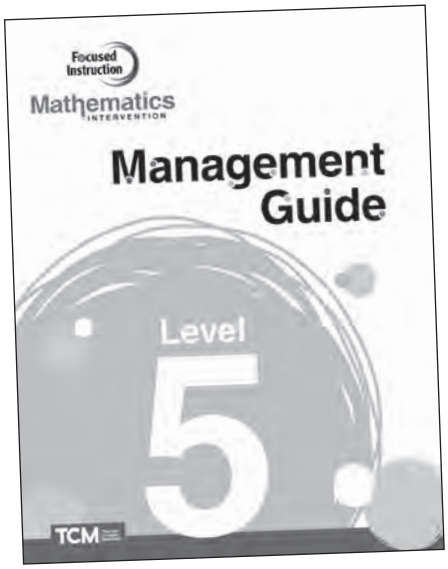
TCM Teacher Created Materials

Resource Overview



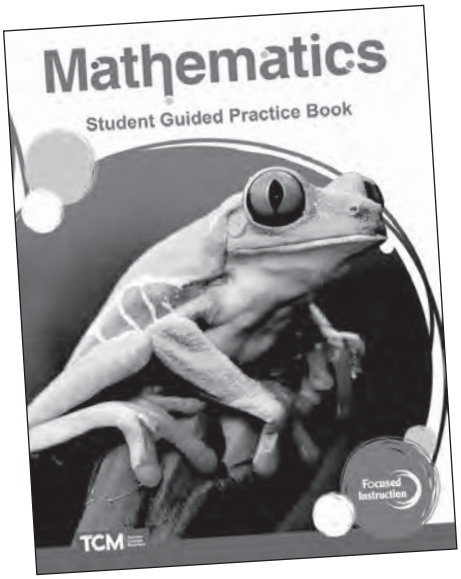
Teacher's Guide

Deliver 30 easy-to-use, research-based lessons that follow the concrete, representational, abstract progression.



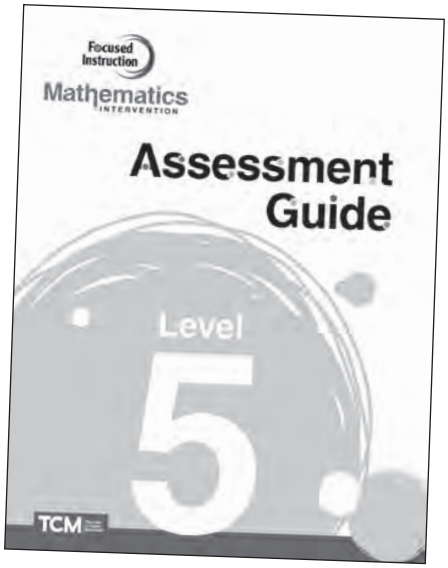
Management Guide

Explore best practices for implementing effective mathematics intervention.



Student Guided Practice Book

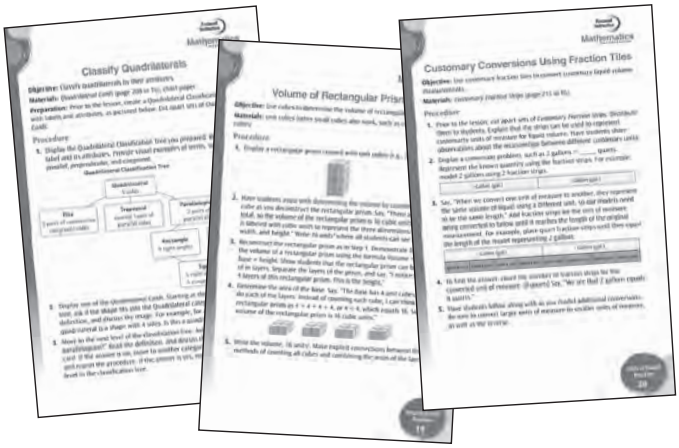
Guide student practice with full-color student activities, including differentiated student pages for each lesson. All student pages are available in the online course on the TCM Learning Platform.



Assessment Guide

Monitor progress through flexible assessment opportunities, including a placement test, benchmark assessments, checklists, rubrics, and summative assessments.

Resource Overview *(cont.)*



Instructional Routine Cards

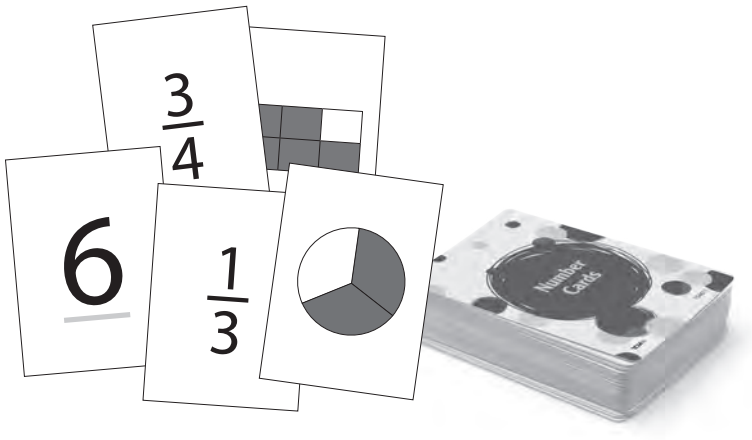
Support instruction through consistent discourse and manipulatives routines.

TCM Learning Platform

Access all program resources and enhance instruction through lesson slides, support videos, assignable student pages, and digital assessments with student performance reporting.

Games Booklet

This resource, used with the game cards, allows students to develop procedural fluency with mathematical concepts.



Game Cards

Six decks of cards, each containing a set of Number Cards and a set of Fraction Cards, support the games included in each lesson.

TCM Learning Platform

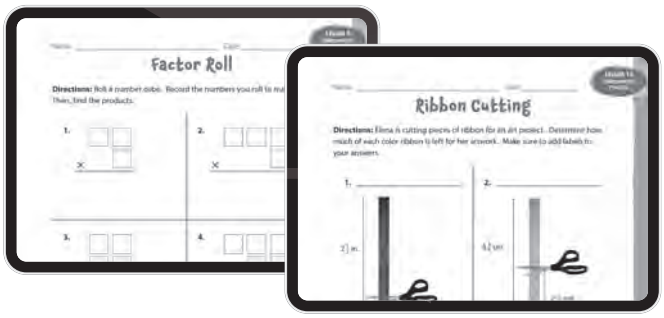
All program components are accessible in digital form via the TCM Learning Platform. This digital platform also houses additional resources for the successful implementation of *Focused Instruction: Mathematics Intervention.* Information for accessing the digital resources can be found in the TCM Learning Platform Quick Start Guide. Scan the QR code or visit this link to get started: **tcmpub.digital/FIM/quickstart**.

Assessments and Reporting

Assessments can be assigned to students and completed on the TCM Learning Platform. All items are standards-aligned and autoscored providing immediate feedback to students and teachers. Performance Reports allow teachers to monitor student performance, identify gaps, and determine next steps for instruction.

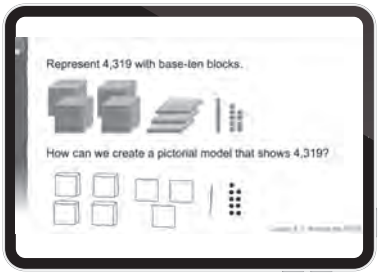
Digital *Student Guided Practice Book*

Each page of the *Student Guided Practice Book* is offered in digital form. Students can print and download pages, enabling easy sharing of completed learning activities.



Lesson Instruction Slides

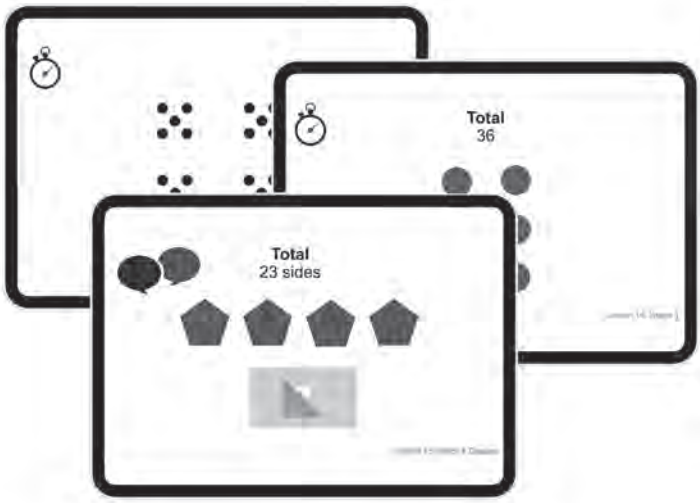
Lesson Instruction slides support the delivery of instruction during Parts 1 and 2 of each lesson. They help teachers connect the dots between student-facing content and instructional strategies.



TCM Learning Platform *(cont.)*

Quick View Slides

Each lesson includes a Quick View presentation to be accessed during instruction in Part 5. These Quick View slides promote discourse and allow students to develop fluency with mathematical concepts, such as subitizing, multiplicative reasoning, place value, and composition and decomposition of numbers.



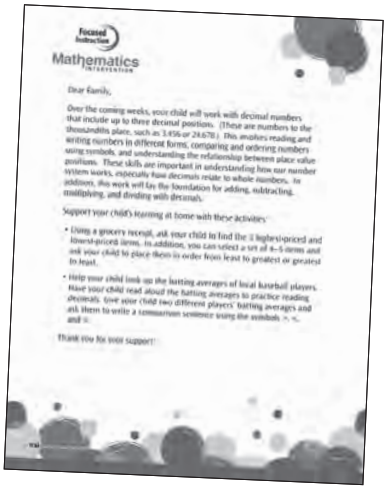
Videos

Teachers can access professional development videos for program implementation and delivery of instruction. To access the Math Intervention videos, scan the QR code or visit this link: **tcmpub.digital/FIM/videos**. The following videos are included:

- **Using Manipulatives as Part of CRA:** Explains the nonlinear Concrete-Representational-Abstract progression, focusing on the importance of using hands-on manipulatives to develop key mathematical understandings. Makes explicit connections between the phases of CRA.
- **Using Instructional Routine Cards:** Learn about why routines are important for students and how to move between the lesson plans in the Teacher's Guide and the Instructional Routine Cards.
- **Using the TCM Learning Platform:** Watch a quick overview of the TCM Learning Platform to learn how to navigate and assign content, review and analyze student data, and make the most of platform features.

School-Home Connection

The TCM Learning Platform is available to students and their families from any connected device. Each lesson series includes a family engagement letter to further support the school-home connection.


Focused Instruction
Mathematics
INTERVENTION

Dear Family,

Over the coming weeks, your child will work with decimal numbers that include up to three decimal positions. (These are numbers to the thousandths place, such as 3.456 or 24.678.) This involves reading and writing numbers in different forms, comparing and ordering numbers using symbols, and understanding the relationship between place value positions. These skills are important in understanding how our number system works, especially how decimals relate to whole numbers. In addition, this work will lay the foundation for adding, subtracting, multiplying, and dividing with decimals.

Support your child's learning at home with these activities:

- Using a grocery receipt, ask your child to find the 3 highest-priced and lowest-priced items. In addition, you can select a set of 4–5 items and ask your child to place them in order from least to greatest or greatest to least.
- Help your child look up the batting averages of local baseball players. Have your child read aloud the batting averages to practice reading decimals. Give your child two different players' batting averages and ask them to write a comparison sentence using the symbols >, <, and =.

Thank you for your support!

Level 5 Standards Correlation *(cont.)*

	Standard	Lesson(s)
Operations and Algebraic Thinking	**Write and interpret numerical expressions.**	
	Evaluate multi-step numerical expressions that include parentheses and brackets.	Lesson 19
	Write numerical expressions to represent real-world scenarios, and write real-world scenarios to describe numerical expressions. Simplify the expressions where appropriate.	Lessons 20 and 21
	Analyze patterns and relationships.	
	Generate two numerical patterns using two given rules that can be written as expressions. Graph the results.	Lesson 26
Number and Operations in Base Ten	**Understand the base-ten place value system.**	
	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.	Lesson 1
	Compare and order decimals to thousandths. Represent comparisons using >, <, and =.	Lesson 2
	Use place value understanding to round multi-digit numbers with decimals to the nearest tenth, hundredth, or whole number.	Lesson 3
	Perform operations with multi-digit whole numbers and with decimals to hundredths.	
	Multiply multi-digit whole numbers using the standard algorithm, demonstrating procedural fluency.	Lesson 6
	Divide up to 4-digit dividends with 1- or 2-digit divisors with procedural fluency.	Lesson 7
	Add, subtract, multiply, and divide decimals to hundredths, using concrete models, drawings, algorithms, and strategies based on place value and properties of operations.	Lessons 4, 5, 8, and 9
Number and Operations with Fractions	**Use equivalent fractions as a strategy to add and subtract fractions.**	
	Add and subtract fractions with unlike denominators referring to the same whole by creating equivalent fractions.	Lessons 10–12
	Add and subtract fractions referring to the same whole, including mixed numbers, to solve real-world problems.	Lesson 13
	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	
	Interpret and represent a fraction as the division of two whole numbers in real-world and mathematical problems.	Lesson 14
	Represent and solve problems involving multiplication of a fraction by a whole number or a fraction by a fraction.	Lesson 15
	Solve real-world problems involving multiplication of fractions and mixed numbers.	Lesson 16
	Divide a unit fraction by a whole number and a whole number by a unit fraction using equations to solve real-world problems.	Lessons 17 and 18

Level 5 Standards Correlation *(cont.)*

	Standard	Lesson(s)
Measurement and Data	**Convert like measurement units within a given measurement system.**	
	Solve problems by calculating conversions within the customary and metric systems. Use the conversions to solve real-world problems.	Lessons 27 and 28
	Represent and interpret data.	
	Measure line segments to the nearest $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{1}{8}$ of an inch, and represent the lengths on a line plot using fractions and decimals. Use the line plot to solve problems.	Lessons 29 and 30
	Understand concepts of volume and relate volume to multiplication and addition.	
	Explore volume of rectangular prisms by packing them with unit cubes without gaps. Explain how volume can be determined by multiplying the number of layers by the number of units in the base.	Lesson 23
	Determine the volume of a rectangular prism with whole-number side lengths using a visual model and a formula.	Lessons 23 and 24
Geometry	**Graph points on the coordinate plane to solve real-world and mathematical problems.**	
	Identify the origin and axes on the coordinate plane. Plot and label ordered pairs in the first quadrant.	Lessons 25 and 26
	Represent real-world and mathematical problems by graphing points in the first quadrant of the coordinate plane, including those generated by number patterns.	Lessons 25 and 26
	Classify two-dimensional figures into categories based on their properties.	
	Classify two-dimensional figures, including triangles and quadrilaterals, in a hierarchy of sets and subsets determined by shared attributes.	Lesson 22

Level 5 Standards Correlation *(cont.)*

Math Practices/Processes Alignment

Each lesson targets one of the eight Standards for Mathematical Practice (SMP). This chart shares a lesson alignment to each SMP, as well as an alignment to the Florida Mathematical Thinking and Reasoning Standards and the TEKS Mathematical Process Standards.

Standard for Mathematical Practice	Florida Mathematical Thinking and Reasoning Standard	TEKS Mathematical Process Standard	Lessons
1. Make sense of problems and persevere in solving them.	Actively participate in effortful learning both individually and collectively.	Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.	14, 18, 21
2. Reason abstractly and quantitatively.	Demonstrate understanding by representing problems in multiple ways.	Create and use representations to organize, record, and communicate mathematical ideas.	10, 12, 30
3. Construct viable arguments and critique the reasoning of others.	Engage in discussions that reflect on the mathematical thinking of self and others.	Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	3, 8, 15, 20
4. Model with mathematics.	Apply mathematics to real-world contexts.	Apply mathematics to problems arising in everyday life, society, and the workplace.	13, 28
5. Use appropriate tools strategically.	Complete tasks with mathematical fluency.	Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.	5, 7, 11, 17
6. Attend to precision.	Assess the reasonableness of solutions.	Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	6, 16, 19, 23, 27, 29
7. Look for and make use of structure.	Use patterns and structure to help understand and connect mathematical concepts.	Analyze mathematical relationships to connect and communicate mathematical ideas.	1, 2, 4, 22, 24, 25
8. Look for and express regularity in repeated reasoning.	Use patterns and structure to help understand and connect mathematical concepts.	Analyze mathematical relationships to connect and communicate mathematical ideas.	9, 26

Table of Contents

Add Decimals to the Hundredths

Learning Outcome

Add decimals to the hundredths place, and use estimation to assess the reasonableness of sums.

Language Goal—Speaking

Explain how to use place value when adding decimals.

Mathematical Practice/Process

Look for and make use of structure.

Lesson Preview

	Part 1	Part 2	Part 3	Part 4	Part 5
Summary	Students use base-ten blocks and pictorial models to add decimals to the hundredths place.	Students use a standard algorithm supported by base-ten blocks or pictorial models to add decimals to the hundredths place. Students build vocabulary.	Students complete the formative assessment and practice adding decimals by playing *Race to 1.0*.	Students actively participate in differentiated learning activities and complete a guided word problem.	Students engage in math discourse, complete an independent rich math task, and strengthen numeracy skills with visual representations.
Materials	• Instructional Routine 6 • base-ten blocks • *Decimal Place Value Mat* (page 203) • whiteboards and markers	• page 23 of the student book • Instructional Routines 1 and 6 • base-ten blocks • *Decimal Place Value Mat* • whiteboards and markers • number cubes	• page 24 of the student book • page 21 in the *Games Booklet* • page 69 in the *Assessment Guide* • *Decimal Place Value Mat* • whiteboards and markers • base-ten blocks	• pages 25–27 of the student book • Instructional Routine 2 • *Decimal Place Value Mat* • base-ten blocks • whiteboards and markers • number cubes	• page 28 of the student book • Instructional Routine 3 • *Lesson 4 Quick View* slides

Possible Student Misconception

Students may start by adding the last two digits of each decimal instead of adding digits with the same place value. For example, in 1.2 + 0.45, students may add 2 tenths + 5 hundredths. To address this, emphasize the importance of place value. Demonstrate how the *Decimal Place Value Mats* help ensure that digits with the same place value are stacked on top of one another. Students may notice that lining up the decimal points also ensures the correct alignment of digits, but avoid teaching this as a shortcut without first developing conceptual place value knowledge.

Vocabulary

place value

sum

To support the CRA teaching model, ensure students have access to hands-on manipulatives throughout all lesson parts. These tools enable students to create concrete representations of math concepts.

Lesson 4 Instruction slides available.

Add Decimals to the Hundredths

Explore

10–15 min. pairs

1. Distribute to each student a variety of base-ten blocks, a whiteboard, and a marker. Provide students one minute to draw small items that they might find at a store (e.g., items that cost less than $5). Have students add price tags to show the costs of the items, making sure to include dollars and cents in the prices.

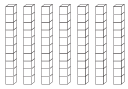
☑ 2. Have partners switch whiteboards. After looking at the prices of their partners' items, have students represent the amounts using base-ten blocks. Observe if students can represent decimal amounts accurately with base-ten blocks.

Vocabulary: Ask students to listen for the words *place value* and *sum* during the lesson. Write the words where students can see them. Students use strategies to build vocabulary on the second day of instruction.

Explain

10–15 min. whole group

3. Distibute *Decimal Place Value Mats* (page 203). Follow the *Add Decimals Using Base-Ten Blocks* routine (card 6) to demonstrate adding 1.7 + 0.56. (*2.26*)

Ones	.	Tenths	Hundredths
	.		
	.		

4. Show students how to use a pictorial model to add 1.7 + 0.56. Draw base-ten blocks to show each addend. Have students find the similarities between the physical base-ten blocks and the representations in the pictorial model. For example, both models can be used to regroup.

5. Add, starting in the hundredths column. Continue to the tenths column. Demonstrate regrouping by crossing out 10 rods and drawing an additional flat in the ones column. Add the ones column. After adding, write the sum and say, "The sum is two and twenty-six hundredths."

Ones	.	Tenths	Hundredths
	.		
	.		
2	.	2	6

6. Demonstrate how to use estimation to assess the reasonableness of the sum (*2.26*) by rounding each addend to the nearest whole number and adding them together. (*2 + 1 = 3*) Discuss that 3 is close in value to 2.26, so the sum is reasonable.

Guided Practice

10–15 min. whole group

7. Solve the following problems together: 0.67 + 0.82; 1.02 + 0.98; 1.45 + 0.78. (*1.49*; *2*; *2.23*) Students can use manipulatives or pictorial models to complete the activity.

Lesson 4 Instruction slides available.

Add Decimals to the Hundredths

Review the Skill

5 min. whole group

1. Follow the *Add Decimals Using Base-Ten Blocks* routine (card 6). Work with students to solve 0.45 + 0.8 (*1.25*) using base-ten blocks and *Decimal Place Value Mats* (page 203).
2. Guide students to use estimation to assess the reasonableness of the sum by rounding each decimal to the nearest whole number. (*0 + 1 = 1*) Point out that 1 is close in value to 1.25, so the sum is reasonable.

Build Vocabulary

5–10 min. whole group

3. Follow the *Build Vocabulary* routine (card 1). Use the Frayer Model Procedure to help students build a conceptual understanding of these words: *place value* and *sum*.

Multilingual Support

Discuss the term *reasonable*. Provide nonmathematical examples and nonexamples of the term. Then, connect the term back to mathematics by sharing examples and nonexamples of reasonable sums.

Explain

10–15 min. whole group

4. Model using a pictorial model to add 0.09 + 1.1. Choose student volunteers to help solve the problem. Ask a student to share the sum. (*1.19*)
5. Have student volunteers use estimation to check the reasonableness of the sum. (*0 + 1 = 1; 1 is close to the sum 1.19.*)
6. Model using a standard algorithm to solve 0.09 + 1.1. Discuss how to line up the decimals and the need to add a zero to the hundredths place in 1.1. Help students make connections between a standard algorithm and the pictorial model, emphasizing that you must add like place values.

$$\begin{array}{r} 0.09 \\ +\ 1.10 \\ \hline 1.19 \end{array}$$

7. Together, use a standard algorithm to add 1.7 + 0.48 (*2.18*) and 1.59 + 0.72 (*2.31*).

Independent Practice

10–15 min. independent

8. Have students complete *Addend Roll* (page 23 of the student book). Students can use manipulatives, pictorial models, and/or a standard algorithm to complete the page. Support students, as needed. Encourage them to think and ask questions before providing prompts to guide their work.

Add Decimals to the Hundredths

Skill Warm-Up

5–10 min. whole group

1. Distribute base-ten blocks, *Decimal Place Value Mats*, whiteboards, and markers. Have students solve 2.51 + 0.6 (*3.11*) using a standard algorithm (demonstrate the use of pictorial models and base-ten blocks, as needed).
2. Have students estimate to determine if the sum is reasonable. (*3 + 1 = 4; 4 is close to 3.11.*)

Quick Check

10–15 min. independent

1. Have students complete *Quick Check* (page 24 of the student book) to gauge student progress toward mastery of the learning outcomes.
2. Based on the results of the *Quick Check* and your observations throughout the lesson, identify students who may benefit from focused reteaching and students who may benefit from extended learning opportunities. See page 13 in the *Assessment Guide* for more information about analyzing formative assessment data and making these instructional decisions. Differentiation will take place on the next day of instruction.

Practice and Application

15–20 min. small groups or pairs

1. Facilitate *Race to 1.0* (page 21 in the *Games Booklet*). Directions are also provided on page 213 of the student book.
2. ☑ As students play, listen to make sure they understand the concept of regrouping when adding decimals and are applying the concept correctly. Model the correct process(es) for students requiring support.
3. Annotate your observations using the *Operations with Decimals Checklist* (page 69 in the *Assessment Guide*).

Multilingual Support

Provide sentence frames to support the communication of mathematical concepts.

- *I have _____ hundredths.*
- *I will regroup _____ hundredths for one _____.*
- *I have _____ tenths.*
- *I can regroup _____ tenths for one _____.*

Scaffolded Support

Some students may benefit from using other tools in place of or in addition to base-ten blocks. To help students track their addition during gameplay, provide the following tools:

- *Decimal Place Value Mat*
- whiteboards and markers to create visual models

Add Decimals to the Hundredths

Differentiation

Based on the results of the previous day's *Quick Check* and observations throughout the lesson, place students in two groups. (See page 13 in the *Assessment Guide* for more information about analyzing formative assessment data and making these instructional decisions.)

- For students who require reteaching, deliver the Focus Mini-Lesson while the other students independently complete *Extend Learning* (page 25 of the student book).
- Then, have the groups switch, and deliver the Extend Mini-Lesson to students who meet or exceed the expected benchmarks while the other students complete *Focus Learning* (page 26 of the student book).

Focus Mini-Lesson

10–15 min. small group

1. Distribute *Decimal Place Value Mats*, whiteboards, markers, and base-ten blocks. Encourage students to use any method—grouping base-ten blocks, drawing pictorial models, or using a standard algorithm—to solve addition problems.
2. Have students estimate the sum of 2.6 + 0.91. (*3 + 1 = 4*) Work with students to solve the problem (*3.51*), and then compare their answers to the estimated sum.
3. Have students solve these additional problems: 5.33 + 4.76; 5.79 + 0.8. (*10.09*; *6.59*) Ensure they are using place value to correctly add the digits. If they are using a standard algorithm, make sure they are lining up the decimal points.

Extend Mini-Lesson

10–15 min. small group

1. As a group, discuss Numbers 1–4 from *Extend Learning* (page 25 of the student book). Have students share strategies and solutions for adding more than two addends and adding decimals to the thousandths. Encourage students to support their thinking with base-ten blocks and/or pictorial models.
2. As time allows, have students solve 3.04 + 9.9 (*12.94*) and 5.8 + 0.89 (*6.69*). Have students share how place value helps them when adding decimals.

Guided Problem-Solving

10–15 min. whole group

Follow the *Guided Problem-Solving* routine (card 2) to support students with problem-solving strategies as they complete *Framing* (page 27 of the student book).

- **Strategies:** For students struggling with multiple addends, have them add the first two addends and the second two addends separately. Then, have them add the sums together to find the total. This problem can also be solved using the following strategies:
  - base-ten blocks
  - pictorial models
  - vertical addition (stacking all four addends on top of each other while making sure to align the decimal points)
- **Solution:** 4.1 feet of wood; 0.8 rounds to 1 and 1.25 also rounds to 1. Also, 4 × 1 = 4, so 4.1 is a reasonable answer.

Add Decimals to the Hundredths

Quick View

10–15 min. whole group

1. Display the informational *Lesson 4 Quick View* slide. Explain that as students observe the slides, they will see a mystery box hiding part of the image. They should be prepared to use the total in the frame and the part of the image that they can see to determine what is hidden behind the mystery box.
2. Display the first *Lesson 4 Quick View* image for 5–7 seconds. Advance to the next slide and provide wait time. Then, ask students to name the quantity behind the mystery box. Accept a variety of responses.
3. Advance to the next slide, which shows the portion hidden behind the mystery box. Have students share how they determined the hidden quantity, including any strategies or grouping methods they used. Encourage students to use place value vocabulary in their responses. Encourage students to confirm or revise their answers.
4. Repeat Steps 2–3 for the remaining *Lesson 4 Quick View* slides.

Multilingual Support

Discuss the word *miles*. Share the term *kilometers*, and discuss the similarities and differences between these two units of measurement.

Rich Math Task

20–30 min. small groups or pairs

1. Display *Race Training* (page 28 of the student book). Read the problem: *Ryan is training to run a race with his friends. This week, he will train on Monday, Wednesday, and Friday. He wants to run a total of 5.5 miles and run the longest on Monday. How many miles could he run each day?*
2. To help students connect this task to real life, have a conversation about the meaning of the word *train*. For example, ask, "Have you or someone you know trained for something?"
3. Follow the *Mathematical Discourse* routine (card 3). Consider using this task-specific prompt in addition to the prompts on the card:
   - How does place value help you solve this problem?

Summative Assessment

A summative assessment to gauge student progress toward mastery of the learning outcomes for Lessons 3–5 is provided on page 101 of the *Assessment Guide*.

Guided Problem-Solving

Objective: Use a strategy to read, understand, plan, and solve mathematical word problems.

Materials: word problem, skill-related manipulatives

Procedure

Unpack the Problem

1. Display and read a word problem aloud to students. Have student pairs summarize the problem without using numbers. (For example, *Jon rides his bike every day. He wants to know how far he rode in a week.*) Then, ask volunteers to share their summaries with the group. Add additional context to support understanding.
2. Reread the problem aloud. Work with students to determine the mathematical information in the problem and what each quantity represents. Assign units to each quantity (e.g., miles).
3. Read the problem aloud again, this time emphasizing the question. Ask, "What are we trying to find out in this problem?" Have students share the question in their own words.
4. Provide time for students to plan. Have partners discuss strategies, tools, and steps for solving the problem.

Solve the Problem

5. Have students work independently to solve the problem, utilizing manipulatives, pictorial models, and/or algorithms. Support students, as necessary.

Share

6. Have students share their solution strategies with the whole group. Start with students who used a hands-on approach before moving to students who used pictorial models. Finally, ask students who used algorithms to share their strategies. Help students make connections among the solution strategies.

Guided Problem-Solving *(cont.)*

Multilingual Support

Help students comprehend the language in a word problem using one of the following strategies:

- Separate words into syllables, including words with affixes, to help with decoding.
- Point out phrases and discuss their meanings (e.g., *set up*, *find out*, *by the time*, *as much as*).
- Share additional context to support student understanding of the problem.
- Change the context of the problem to amplify student interests, experiences, and cultures.

Scaffolded Support

Support students with understanding the context of the numerical parts of the word problem by organizing the known and unknown values in a table.

Value (Known or Unknown)	Units
5	$ per child to visit the zoo
7	$ per adult to visit the zoo
25	number of children going
4	number of adults going
?	total cost for the zoo visit

This routine is informed by the Three Reads strategy from Routines for Reasoning: Fostering the Mathematical Practices in All Students *by Grace Kelemanik, Amy Lucenta, and Susan Janssen Creighton.*

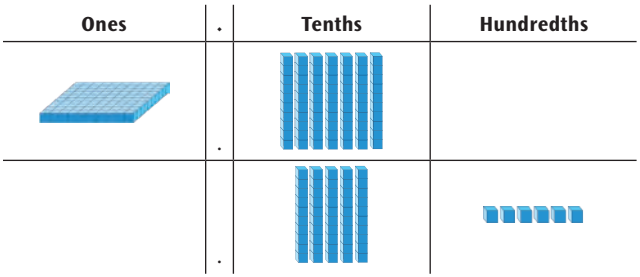
Add Decimals Using Base-Ten Blocks

Objective: Use base-ten blocks to add decimal numbers to the hundredths place.

Materials: base-ten blocks, *Decimal Place Value Mats* (page 203 in TG), *Build Decimals Using Base-Ten Blocks* routine (card 5) (*optional*)

Procedure

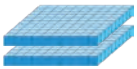
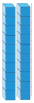
1. Distribute base-ten blocks and decimal place value mats. Display an addition problem with decimal numbers, such as 1.7 + 0.56. Work with students to build each addend with base-ten blocks. Refer to the *Build Decimals Using Base-Ten Blocks* routine (card 5) if necessary. Discuss which base-ten block represents the whole. (*The flat represents the whole because the decimal number has a hundredths place, so the whole needs to be split into hundredths.*)



2. Starting with the lowest place value, combine the blocks from both addends. For this example, say, "0 hundredths plus 6 hundredths equals 6 hundredths." Write 6 under the hundredths column. Have students model this step with their materials.
3. Move to the place to the left. Add the tenths column. Say, "7 tenths plus 5 tenths equals 12 tenths." Explain that since there are more than 10 rods in the tenths column, students will need to regroup. To regroup, exchange 10 rods for 1 flat, and place the flat in the ones column. Then, identify the remaining tenths, and write 2 under the tenths column. Have students perform the step using their materials.

Add Decimals Using Base-Ten Blocks *(cont.)*

4. Have students actively follow along as you add the ones column. Say, "1 one plus the 1 one from grouping equals 2 ones." Write 2 under the ones column.

ones	.	tenths	hundredths
	.		

5. Add the sum to the original expression, and read the equation aloud. (*1.7 + 0.56 = 2.26*)

Multilingual Support

Identify the name of each type of base-ten block: cube, flat, rod, and unit cube. Gesture to the corresponding base-ten blocks each time you say the terms aloud. Encourage students to use the names of the base-ten blocks when sharing mathematical thinking.

Scaffolded Support

Provide a ten frame to support students with organizing and regrouping unit cubes.

This routine is informed by the video Using Base-10 Blocks to Add *by the National Center on Intensive Intervention.*

Name: _____ Date: _____

Addend Roll

Directions: Roll a number cube to fill in the addends for each problem. Then, find the sums.

	0.28
	1.32
	2.7
	0.08
	0.93
	0.7

1. ☐ + ☐ = ☐

2. ☐ + ☐ = ☐

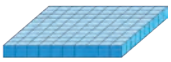
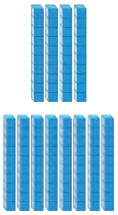
3. ☐ + ☐ = ☐

Name: _____ Date: _____

Quick Check

Directions: Answer the questions.

1. Which expression do the base-ten blocks represent?

Ones	.	Tenths	Hundredths
	.		

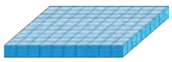
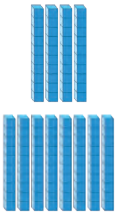
(A) 0.14 + 0.83

(B) 1.80 + 4.3

(C) 140 + 83

(D) 1.4 + 0.83

2. Which number is represented by the base-ten blocks?

Ones	.	Tenths	Hundredths
	.		

(A) 0.97

(B) 2.23

(C) 1.123

(D) 2.20

3. Zach spends $1.50 on a pencil and $0.85 on a highlighter. How much money does Zach spend on school supplies?

(A) $2.35

(B) $2.40

(C) $1.35

(D) $10.00

4. Which word is the answer for an addition problem?

(A) product

(B) difference

(C) sum

(D) place value

Name: _____ Date: _____

Extend Learning

Directions: Solve the equations.

1. 0.34 + 0.55 + 0.61 = _____

2. 1.04 + 1.9 + 0.89 = _____

3. 12.6 + 3.75 = _____

4. 7.4 + 0.346 = _____

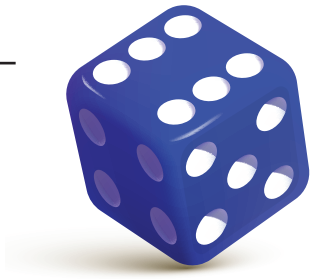
Directions: Roll a number cube. After each roll, place the numbers in any box to create two addition problems. Then, add to find the sums. Circle the larger sum.

5.

$$\begin{array}{r} \square.\square\square \\ +\ \square.\square\square \\ \hline \end{array}$$

6.

$$\begin{array}{r} \square.\square\square \\ +\ \square.\square\square \\ \hline \end{array}$$



Name: _____ Date: _____

Focus Learning

Directions: Solve the equations.

1. 0.34 + 0.55 = _____

2. 1.04 + 1.91 = _____

3. 2.6 + 3.07 = _____

4. 3.67 + 7.4 = _____

Directions: Roll a number cube. After each roll, place the numbers in any box to create two addition problems. Then, add to find the sums. Circle the larger sum.

5.

$$\begin{array}{r} \square.\square\square \\ +\ \square.\square\square \\ \hline \end{array}$$

6.

$$\begin{array}{r} \square.\square\square \\ +\ \square.\square\square \\ \hline \end{array}$$

Name: _____ Date: _____

Framing

Directions: Solve the problem.

Hanni wants to build a frame for her favorite drawing. Before she goes to the hardware store to buy wood, she needs to find the perimeter of her drawing. The measurements are shown in the diagram. How many feet of wood will Hanni need to buy? Estimate to determine if your answer is reasonable.

Name: _____ Date: _____

Race Training

Directions: Solve the problem.

Ryan is training to run a race with his friends. This week, he will train on Monday, Wednesday, and Friday. He wants to run a total of 5.5 miles and run the longest on Monday. How many miles could he run each day?

Race to 1.0

Game Overview

Students practice addition of decimals by racing to the sum of 1.0. They model addition and regrouping with base-ten blocks.

Teacher Tip: It is important for students to recognize that the value represented before and after regrouping is the same. The number of unit cubes and rods (tenths and hundredths) change after regrouping, but the number's value does not. For example, a student may have 2 rods and 14 unit cubes. After regrouping, they should have 3 rods and 4 unit cubes. The value of both base-ten block combinations is 0.34.

Multilingual Support

Provide sentence frames to support the communication of mathematical concepts.

- *I have _____ hundredths.*
- *I will regroup _____ hundredths for one _____.*
- *I have _____ tenths.*
- *I can regroup _____ tenths for one _____.*

Scaffolded Support

Some students may benefit from using other tools in place of base-ten blocks. To track their addition during gameplay, consider providing students with a hundredths grid. Have students color in squares to show the sum.

Game Variations

Race to 2.0

- Extend regrouping practice by racing to 2.0 with base-ten blocks. Players will need additional base-ten blocks.

Race from 1.0

- Students practice subtraction of decimals using base-ten blocks. Players start at 1.0 and subtract until they reach 0.

See pages 92–94 in the *Assessment Guide* for the Gameplay checklist and rubric.

Student Directions

Race to 1.0

2 to 4 Players

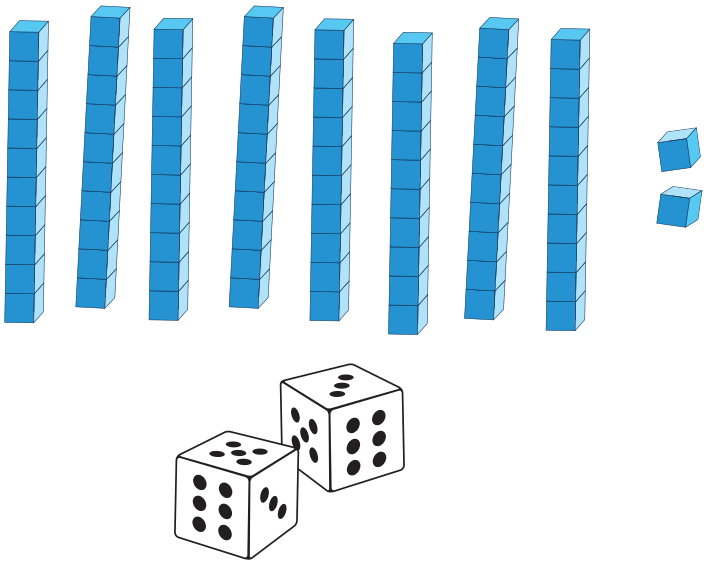
Skill: Add decimals with and without regrouping.

Materials: two number cubes, base-ten blocks, decimal place value mats

How to Win: The first player to collect the value of 1.0 in base-ten blocks is the winner.

Setup

1. Distribute base-ten blocks. Each player needs 12 unit cubes, 12 rods, and 1 flat. The group also needs two number cubes.
2. Distribute a decimal place value mat to each player.
3. Each player rolls one number cube once. The player with the greatest number goes first.



How to Play

1. On your turn, roll two number cubes.
   - Add the digits together. This is the number of hundredths you collect. For example, if you roll a 2 and a 5, the sum is 7, or 0.07.
   - Place that quantity of unit cubes on your decimal place value mat.

   If you roll a sum of 10, 11, or 12 on your first turn, add the correct number of unit cubes to your place value mat and show regrouping.
2. During each turn, roll two number cubes, add the digits, and place the correct number of unit cubes on your decimal place value mat.
   - Each time you collect 10 or more unit cubes, regroup 10 unit cubes for 1 rod (0.1).
3. Once you have accumulated 10 rods, regroup them for 1 flat (1.0). The first player to reach 1.0 (or the player with the highest total when time is up) wins!

   When you finish the game, start again! Continue playing until time is up.