STAAR® Edition

Closing the Distance

Grade 4 Mathematics

Teacher Edition

region 4®

Closing the Distance:
Grade 4 Mathematics

Teacher Edition

Product ID:
407-1868

Region 4 Education Service Center supports student achievement by providing educational products and services that focus on excellence, service, and children.

Published by
Region 4 Education Service Center
7145 West Tidwell Road
Houston, Texas 77092-2096
www.esc4.net

ISBN-13: 978-1-945615-46-7

Printed in the United States of America

Digital Access

Digital files are available by accessing the Region 4 Hub at http://r4hub.esc4.net.

Record your Region 4 Hub access information for future reference.

Username:

Password Hint:

For instructions regarding online access, contact shipping@esc4.net.

Acknowledgments
Region 4 Education Service Center would like to acknowledge the talent and expertise of those who contributed to the development of this book. Their dedication to our core values of excellence in service for children made possible the creation of this resource to assist educators in providing quality, effective instruction for all students.

Authors
Kori Keaton
Stefani Kulhanek, Ed.D.
Christina Lincheck
Crystal Munsinger
Sana Brennan
Sherry Olivares
Shelley Bolen-Abbott
Sharon Benson, Ed.D.

Design Team
David Martinez

Table of Contents

1. A resource that serves as an intervention for students who are close to success on the State of Texas Assessments of Academic Readiness (STAAR®)

2. A resource that integrates related TEKS to provide a review of mathematics concepts and skills, paired with opportunities for rigorous mathematical discourse

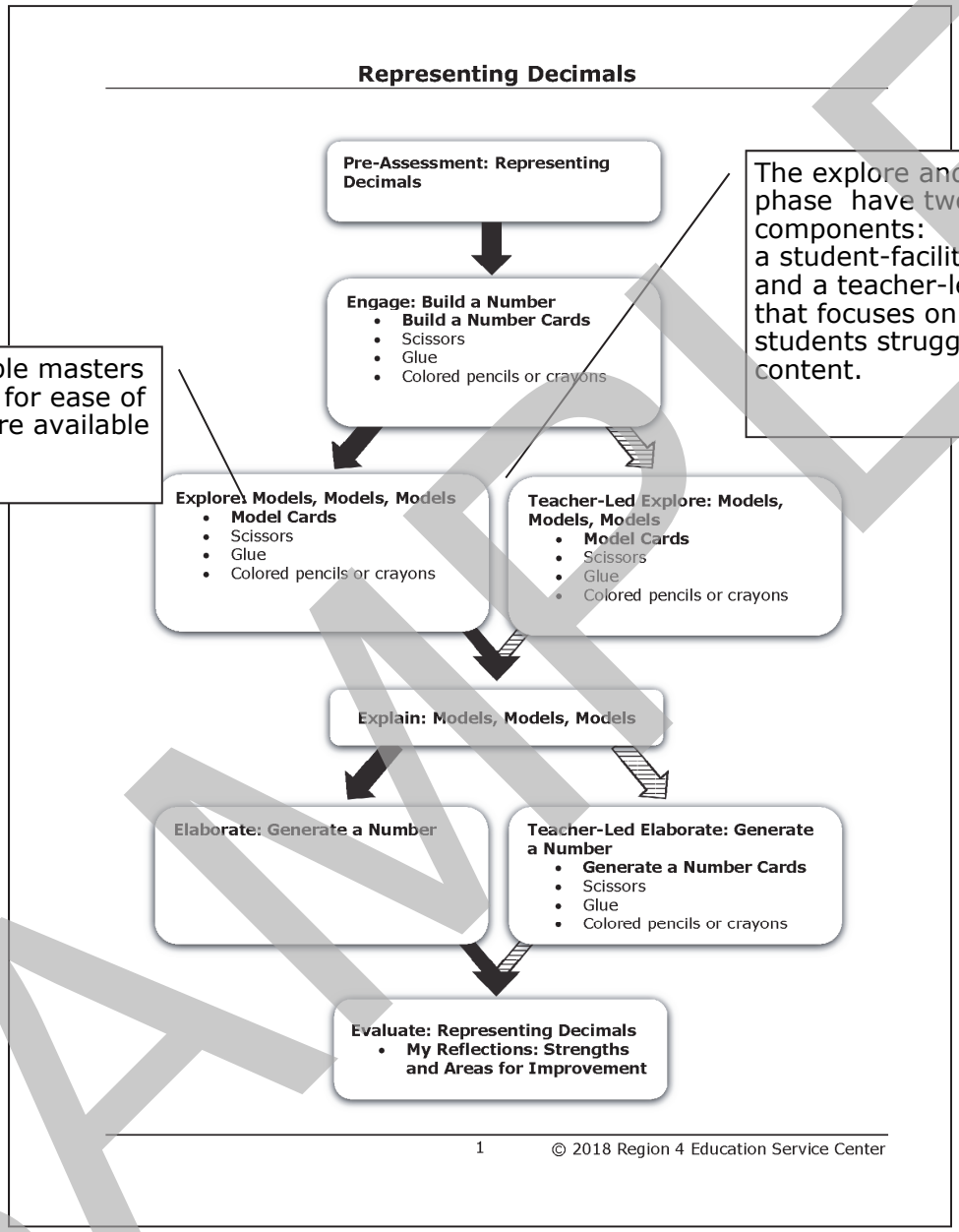
3. A resource of classroom-ready 5E activities that keeps students engaged in a positive, productive manner through strategies, including modeling, card sorts, matching, cooperative learning, and analysis of student work

4. A resource that provides an opportunity for students to track their progress with an analysis of strengths and areas to improve within each lesson

5. A resource that includes a pre-assessment to provide teachers and students quick and timely information on student readiness for the activities in the lesson and identifies students that may benefit from a small-group intervention setting

6. A resource that includes teacher-led interventions for students who may struggle with specific content

What is in a lesson found in *Closing the Distance*?



Titles of reproducible masters are printed in bold for ease of reference. These are available in digital format.

The explore and the elaborate phase have two concurrent components:
a student-facilitated activity and a teacher-led intervention that focuses on the needs of students struggling with the content.

What is in a lesson found in *Closing the Distance*?

Each lesson supports multiple student expectations with a focus on the STAAR® readiness standards. Student expectations are listed at the beginning of each lesson.

Materials for each phase are summarized on one page for ease in preparation.

Grouping strategies for each phase are summarized to assist in the arrangement of the classroom.

A focused pre-assessment is provided for each lesson. Tier I intervention activities are identified for use with students who may struggle with the identified content.

Representing Decimals

	Activity Title	TEKS	Additional Materials	Instructional Grouping
Pre-Assessment	**Pre-Assessment: Representing Decimals**	4(2)(B) 4(2)(E) 4(2)(G)		Individual
Engage	**Build a Number**	4(2)(B) 4(2)(E) 4(2)(G)	• **Build a Number Cards**	Individual
Explore Explain	**Models, Models, Models**	4(2)(B) 4(2)(E) 4(2)(G)	• **Model Cards** • Scissors • Tape or glue • Colored pencils or crayons	Groups of 2 Whole Group
Elaborate	**Generate a Number**	4(2)(B) 4(2)(E) 4(2)(G)	• **Generate a Number Cards** (for intervention) • Scissors (for intervention) • Tape or glue (for intervention) • Colored pencils or crayons (for intervention)	Groups of 2 or Individual
	luate: resenting imals	4(2)(B) 4(2)(E) 4(2)(G)	• **My Reflections: Strengths and Areas to Improve**	Individual

ducible masters.
advanced preparation.

Pre-Assessment: Representing Decimals
The purpose of this activity is to formatively assess students' understanding of how to represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals and relate decimals to fractions that name tenths and hundredths.

The identified activities are recommended for small-group, teacher-led interventions for students who may struggle with the specific content in **Pre-Assessment: Representing Decimals**.

Content	Teacher-Led Intervention
Representing a decimal using expanded notation	• **Build a Number** • **Models, Models, Models** • **Generate a Number**
Representing a decimal using models, including money	• **Models, Models, Models** • **Generate a Number**
Relating decimals to fractions	• **Build a Number** • **Models, Models, Models** • **Generate a Number**

What is in a lesson found in *Closing the Distance*?

The explain phase includes debriefing questions to guide class discussion for key understandings and skills found in the activities.

Representing Decimals

Explain: Debriefing Questions

The purpose of this activity is to highlight key understandings and skills applied in the Explore phase of this lesson.

- How can you represent a decimal using a base ten model?
- How can you represent a decimal using a money model?
- How can you use place value to describe the values represented by a model?
- How can you represent a number using standard form or numerals?
- How can you represent a number using expanded notation?
- How can a fraction be described as a decimal?

Complete directions are included on each student page. Additional directions are provided for teacher-facilitated aspects of an activity.

Additional materials may be needed to complement the student pages.

Elaborate: Generate a Number

The purpose of this activity is to reinforce students' understanding of representing decimals and relating decimals to fractions that name tenths and hundredths.

Additional Directions	Additional Materials
None	None

Listen For . . .

- *Connections among the different forms and representations used to represent a number.*
- *Use of different models to represent decimals.*
- *Use of place value to describe the value of numbers represented in a model.*
- *Understanding that if a dollar represents one whole, then dimes represent tenths and pennies represent hundredths.*

Vocabulary

- *Decimal*
- *Hundredths*
- *Ones*
- *Tenths*

Key vocabulary terms are identified for each phase.

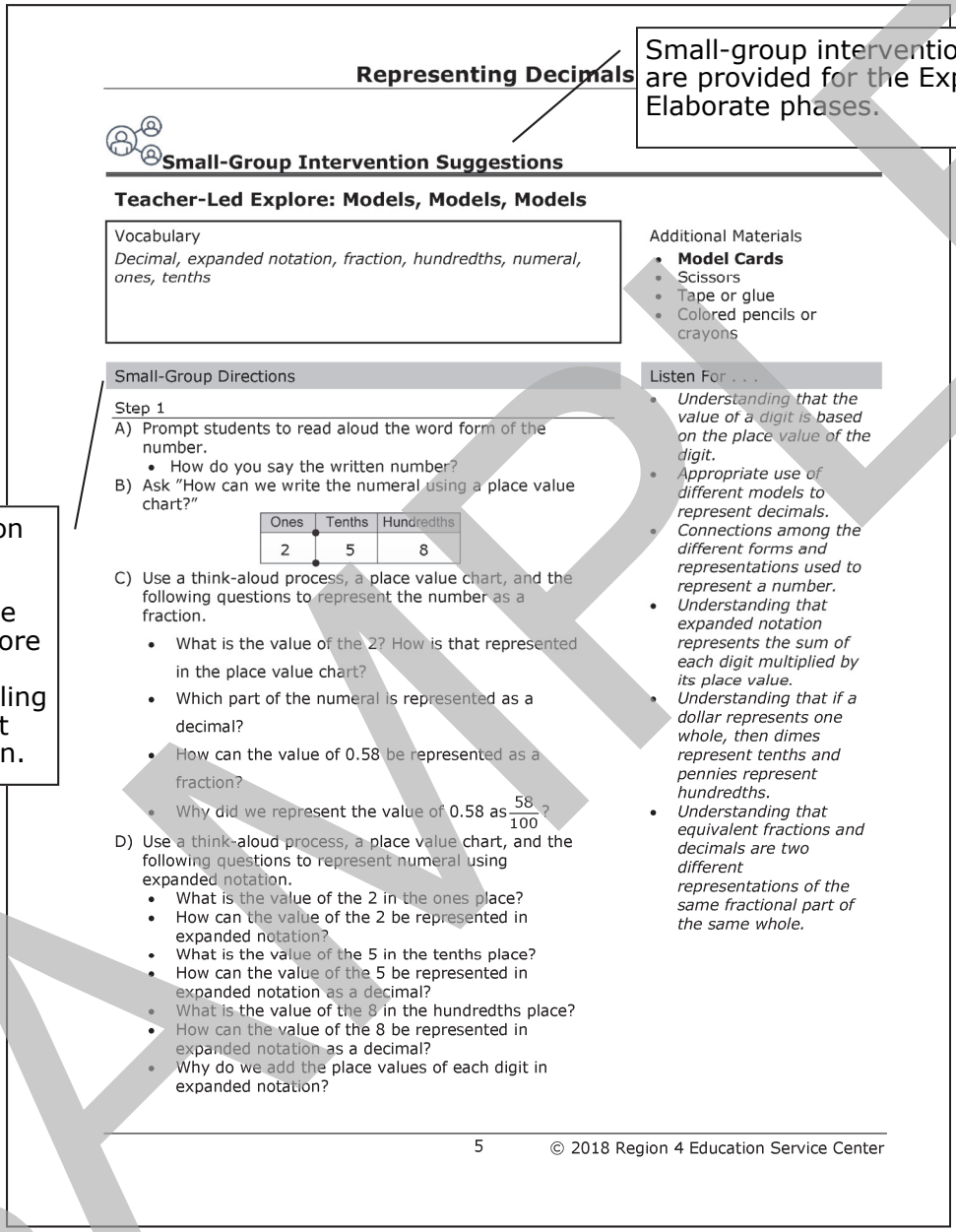
Key ideas and concepts to listen for as students complete each phase are listed.

Evaluate: Representing Decimals

The purpose of this activity is to assess students' understanding of how to represent a decimal using numerals, expanded notation, a visual model, and money and how to relate decimals to fractions that name tenths and hundredths.

Question	TEKS	Correct Answer
1	4(2)(G)	A
2	4(2)(B)	C
3	4(2)(E)	B
4	4(2)(B)	D

Each selected-response item is labeled with the content student expectation.



Small-group intervention suggestions are provided for the Explore and the Elaborate phases.

Each intervention provides instructions on how to make the mathematics more explicit for students struggling with the content within the lesson.

Representing Decimals

Small-Group Intervention Suggestions

Teacher-Led Explore: Models, Models, Models

Vocabulary

Decimal, expanded notation, fraction, hundredths, numeral, ones, tenths

Additional Materials

- **Model Cards**
- Scissors
- Tape or glue
- Colored pencils or crayons

Small-Group Directions

Step 1

A) Prompt students to read aloud the word form of the number.
   - How do you say the written number?

B) Ask "How can we write the numeral using a place value chart?"

Ones	Tenths	Hundredths
2	5	8

C) Use a think-aloud process, a place value chart, and the following questions to represent the number as a fraction.
   - What is the value of the 2? How is that represented in the place value chart?
   - Which part of the numeral is represented as a decimal?
   - How can the value of 0.58 be represented as a fraction?
   - Why did we represent the value of 0.58 as $\frac{58}{100}$?

D) Use a think-aloud process, a place value chart, and the following questions to represent numeral using expanded notation.
   - What is the value of the 2 in the ones place?
   - How can the value of the 2 be represented in expanded notation?
   - What is the value of the 5 in the tenths place?
   - How can the value of the 5 be represented in expanded notation as a decimal?
   - What is the value of the 8 in the hundredths place?
   - How can the value of the 8 be represented in expanded notation as a decimal?
   - Why do we add the place values of each digit in expanded notation?

Listen For . . .

- *Understanding that the value of a digit is based on the place value of the digit.*
- *Appropriate use of different models to represent decimals.*
- *Connections among the different forms and representations used to represent a number.*
- *Understanding that expanded notation represents the sum of each digit multiplied by its place value.*
- *Understanding that if a dollar represents one whole, then dimes represent tenths and pennies represent hundredths.*
- *Understanding that equivalent fractions and decimals are two different representations of the same fractional part of the same whole.*

5 © 2018 Region 4 Education Service Center

Each lesson provides an opportunity for student reflection as the student self-assesses strengths for each phase of the lesson. Following this self-assessment, students are prompted to note what they are most proud of and to set a goal to improve understanding.

Name: _____ Date: _____

My Reflections: Strengths and Areas for Improvement

Place a plus sign for each statement you feel is a strength after completing each lesson activity.

Lesson Activity	I can represent the value of a digit in a decimal using expanded notation.	I can represent decimals using models.	I can represent decimals using money.	I can relate decimals to fractions.
Build a Number				
Models, Models, Models				
Generate a Number				
Evaluate: Representing Decimals				

I am most proud . . .

_____

_____

_____

To improve my understanding, I . . .

_____

_____

_____