Closing the Distance:
Grade 2 Mathematics

Teacher Edition

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What is *Closing the Distance*?

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

2. 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.

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

4. 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.

5. 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*?

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.
Student expectations are listed at the beginning of each lesson.

![Representing Addition and Subtraction Problems](chart)

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**Pre-Assessment: Representing Addition and Subtraction Problems**

The purpose of this activity is to formatively assess students’ understanding of how to represent addition and subtraction problems where the unknown can be any one of the terms using pictorial models and number sentences.

The identified activities are recommended for small-group, teacher-led interventions for students who may struggle with the specific content in Pre-Assessment: Represent Addition and Subtraction Problems.

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<th>Content</th>
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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.
What is in a lesson found in *Closing the Distance*?

**Representing Addition and Subtraction Problems**

**Engage: Family Road Trip**
The purpose of this activity is to assess background knowledge related to representing addition and subtraction problems with a strip diagram and equation.

- **Additional Directions**
  - None
- **Additional Materials**
  - None
- **Vocabulary**
  - Equation
  - Known value
  - Strip diagram
  - Unknown value

**Explore: Representing Problems, Part 1**
The purpose of this activity is to reinforce students’ understanding of how to determine which open number line and strip diagram represent a given problem.

1. **Display Directions: Representing Problems**
2. **Additional Directions**
   - Directions:
     - Representing Problems
     - Representation Cards
     - Scissors
     - Tape or glue

- **Listen For . . .**
  - Understanding that strip diagrams and open number lines may vary based on the relationships among the known and unknown values in a problem.
  - Understanding of strip diagram notation for one-step and multi-step problems.
  - Understanding of open number line representations for one-step and multi-step problems.
- **Vocabulary**
  - Known value
  - Open number line
  - Strip diagram
  - Unknown value

**Explain: Debriefing Questions**
The purpose of this activity is to highlight key understandings and skills applied in the Explore phase of this lesson.

- How is the unknown represented in this model?
- How is the relationship among the knowns and unknowns represented in this model?
- How does the strip diagram (open number line) represent the problem?
- What operations and steps are implied by this model?

The explain phase includes debriefing questions to guide class discussion for key understandings and skills found in the activities.
Each selected-response item or performance tasks 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.

<table>
<thead>
<tr>
<th>Teacher-Led Explore: Representing Problems, Part 1</th>
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<tbody>
<tr>
<td><strong>Vocabulary</strong></td>
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<td>open number line, strip diagram</td>
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**Small-Group Directions**

Step 1

A) Prompt students to read problem 1.
B) Use a think aloud process that includes the following questions:
   - What is known?
   - What is unknown?
   - What is happening with Christopher’s money in the problem?
   - What is the relationship between the knowns?
   - How can I represent the total amount of money Christopher earned using a strip diagram? Why?
   - How can I represent the money Christopher spent on the strip diagram? Why?
   - How can I represent the unknown part on the strip diagram? Why?

C) Prompt students to match a strip diagram and an open number line *Representation Card* to problem 1.
   - Which model best represents joining $124 and $568, then separating $205?
   - How does the strip diagram represent the actions that occurred in the problem?
   - How does the open number line represent the actions that occurred in the problem?
   - How is the unknown represented in each model?

D) Prompt students to label each part of each model with the part of the word problem it represents.
   - How did you label the model? Why?
   - How did you represent the unknown?

E) Repeat process for problem 2.

Step 2

A) Prompt students to read problem 2.
B) Use a think aloud process that includes the following questions:
   - What is known?
   - What is unknown?
   - What is the relationship between the knowns?
   - How can I represent the whole amount using a strip diagram? Why?

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

### My Reflections: Strengths

After completing each activity, place a + if the "I can . . ." describes a strength.

<table>
<thead>
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<th>I can represent a problem with a strip diagram.</th>
<th>I can represent a problem with an open number line.</th>
<th>I can represent a problem with an equation.</th>
<th>I can represent a multi-step problem.</th>
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I am most proud . . .

To improve my understanding, I . . .