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

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.

### Table: Pre-Assessment: Solving Multiplication and Division Problems

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activity Title</th>
<th>TEKS</th>
<th>Additional Materials</th>
<th>Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td>Pre-Assessment: Solving Multiplication and Division Problems</td>
<td>3(4)(K)</td>
<td></td>
<td>Individual</td>
</tr>
<tr>
<td>Engage</td>
<td>Packages of Pencils (for display)</td>
<td>3(4)(K)</td>
<td>* Four Corner Posters (1 set for display)</td>
<td>Individual</td>
</tr>
<tr>
<td>Explore Explain</td>
<td>Multiplication and Division: Loop</td>
<td>3(4)(K)</td>
<td>* Multiplication and Division: Loop Cards</td>
<td>Groups of 2 Whole Group</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* Scissors</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* Tape or Glue</td>
<td></td>
</tr>
<tr>
<td>Elaborate</td>
<td>Multiplication and Division: Find Someone Who . . .</td>
<td>3(4)(K)</td>
<td>* Directions: Multiplication and Division: Find Someone Who . . . (for display)</td>
<td>Groups of 2 Whole Group</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Evaluate: Solving Multiplication and Division Problems</td>
<td>3(4)(K)</td>
<td>* My Reflections: Strengths and Areas for Improvement</td>
<td>Individual</td>
</tr>
</tbody>
</table>

**Bold items are reproducible masters.**

**Italicized items require advanced preparation.**

**Pre-Assessment: Solving Multiplication and Division Problems**

The purpose of this activity is to assess students’ understanding of how to solve one-step and two-step problems involving multiplication and division.

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

<table>
<thead>
<tr>
<th>Content</th>
<th>Teacher-Led Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solving one-step and two-step problems</td>
<td>Multiplication and Division: Loop</td>
</tr>
<tr>
<td>Using properties of operations to solve problems</td>
<td>Multiplication and Division: Find Someone Who . . .</td>
</tr>
</tbody>
</table>

Grouping strategies for each phase are summarized to assist in the arrangement of the classroom.
What is in a lesson found in *Closing the Distance*?

### Solving Multiplication and Division Problems

**Engage: Packages of Pencils**
The purpose of this activity is to assess background knowledge related to using a problem solving process to solve two-step multiplication and division problems.

<table>
<thead>
<tr>
<th>Additional Directions</th>
<th>Additional Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance preparation: Post the <em>Four Corner Posters</em> around the room.</td>
<td><em>Four Corner Posters</em> (1 set for display)</td>
</tr>
</tbody>
</table>
| 1. Display *Package of Pencils*.  
2. Prompt students to independently solve the problem.  
3. Once students have solved the problem, prompt students to stand next to the poster which displays their answer.  
4. Prompt student to form small groups of 2 at their poster and discuss their solution process.  
*Note: If a student feels that he or she needs to change answers, allow him or her to do so.*  
5. Prompt a student at the 12 pencils poster to explain his or her thinking. | |

**Listen For...**
- Appropriate use of multiplication or division.
- Understanding that the product of the number of groups and the number of objects in each group represents the total number of objects in the set.
- Understanding that dividing the total number of objects into equal groups produces a quotient that represents the number of objects in each group in this set.

**Explore: Multiplication and Division: Loop**
The purpose of this activity is to reinforce students’ understanding of how to solve one-step and two-step problems involving multiplication and division.

<table>
<thead>
<tr>
<th>Directions</th>
<th>Additional Materials</th>
</tr>
</thead>
</table>
| None | *Multiplication and Division: Loop Cards*  
*Scissors*  
*Tape or Glue* |

**Listen For...**
- Understanding of when to create equal groups or separate into equal groups.
- Understanding of when to determine the total number of objects and when to determine the number of groups or the number of objects in each group.
- Appropriate use of addition, subtraction, multiplication, and division.
- Understanding of the connections among the situation and the steps taken to solve the problem.

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Key ideas and concepts to listen for as students complete each phase are listed. Additional materials may be needed to complement the student pages. Key vocabulary terms are identified for each phase.
The explain phase includes debriefing questions to guide class discussion for key understandings and skills found in the activities.

Solving Multiplication and Division Problems

\[ \text{GIA Explain: Debriefing Questions} \]

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

- What is known in the problem? What is unknown?
- How does what is known and unknown help you determine the operations you use to solve the problem?
- Why will adding all of the numbers stated in the problem lead to an incorrect answer?
- How do you know when a problem is prompting multiplication? How do you determine which values are factors or the product?
- How do you know when a problem is prompting division? How do you determine which value is the divisor or the dividend?
- When problems require two steps to solve, how do you determine which step to do first?

\[ \text{GIA Elaborate: Multiplication and Division: Find Someone Who...} \]

The purpose of this activity is to reinforce students’ understanding of how to solve one-step and two-step multiplication and division problems using the properties of operations.

Directions

- None

Additional Materials

- Directions: Multiplication and Division: Find Someone Who... (for display)
- Vocabulary
  - Divide
  - Multiply

Listen For

- Understanding that Alyssa’s and Peria’s strategy reflect forming groups of four of each color of flower to determine the total number of flowers needed.
- Understanding that Mike’s strategy reflects determining the total number of flowers needed. Adding groups of four flowers. Then dividing the total number of flowers by four to determine the total number of flowers needed.
- Understanding that Mike’s strategy decomposes 19 to calculate the product of 19 and 4.
- Understanding why each strategy applies to the new problem.

Evaluate: Solving Multiplication and Division Problems

The purpose of this activity is to assess students’ ability to solve one-step and two-step multiplication and division problems.

<table>
<thead>
<tr>
<th>Question</th>
<th>TCKS</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3(4)(K)</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>3(4)(K)</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>3(4)(K)</td>
<td>A</td>
</tr>
<tr>
<td>4</td>
<td>3(4)(K)</td>
<td>D</td>
</tr>
</tbody>
</table>

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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.
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 and Areas for Improvement

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

<table>
<thead>
<tr>
<th>Lesson Activity</th>
<th>I can solve one-step problems involving addition and subtraction using pictorial models, properties of operations, and recall of facts.</th>
<th>I can solve division using pictorial models, properties of operations, and recall of facts.</th>
<th>I can solve two-step problems involving addition and subtraction using pictorial models, properties of operations, and recall of facts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packages of Pencils</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiplication and Division: Loop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiplication and Division: Find Someone Who . .</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate: Solving Multiplication and Division Problems</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I am most proud . . .

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

To improve my understanding, I . . .

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

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