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.

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

**Order of Operations**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activity Title</th>
<th>TEKS</th>
<th>Additional Materials</th>
<th>Instructional Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment: Order of Operations</td>
<td>S(4)(E)  S(4)(F)</td>
<td>Individual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engage</td>
<td>Checking Steps</td>
<td>S(4)(F)</td>
<td></td>
<td>Individual</td>
</tr>
<tr>
<td>Explore</td>
<td>Order of Operations: Dominoes</td>
<td>S(4)(E)  S(4)(F)</td>
<td>Scissors (1 per group)  Tape or glue (1 per group)</td>
<td>Groups of 2 Whole Group</td>
</tr>
<tr>
<td>Explain</td>
<td>Explain</td>
<td></td>
<td>Chart paper or large construction paper (1 per group)</td>
<td></td>
</tr>
</tbody>
</table>

**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.**

**Bold items are included on the CD. Italicized items require advanced preparation.**

**Pre-Assessment: Order of Operations**

The purpose of this activity is to formatively assess students’ understanding of how to simplify numerical expressions that do not involve exponents.

The identified activities are recommended for small-group, teacher-led interventions for students who may struggle with the specific content or process pieces in Pre-Assessment: Order of Operations.

<table>
<thead>
<tr>
<th>Content</th>
<th>Teacher-Led Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describing the meaning of parentheses and brackets in a numeric expression</td>
<td>Order of Operations: Dominoes</td>
</tr>
<tr>
<td>Simplifying expressions with parentheses and brackets</td>
<td>Order of Operations: Dominoes</td>
</tr>
<tr>
<td></td>
<td>Playing with Parentheses</td>
</tr>
</tbody>
</table>

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

**Order of Operations**

**Elaborate: Playing with Parentheses**

The purpose of this activity is to reinforce students' understanding of simplifying numeric expressions that involve grouping symbols.

**Additional Directions**
1. Distribute *Playing with Parentheses Card* to each student.
2. Prompt each student to simplify the expression on his or her card.
3. Prompt students to form pairs. Each pair should include a situation card and an expression card that have the same expression to be simplified.
4. Prompt pairs of students to form groups of four for the Quad A Discussion. Each group of four students should have two pairs of cards with different expressions.
5. Prompt students to form new groups of four for the Quad B Discussion. Each group of four students should have four different situation cards or four different expression cards.

Listen for...
- Connections between the questions in context and the equivalent question, "What is the value of this expression?"
- Connections between the role of the grouping symbols in \[3(10.50) + 3(13)] - 5, \[3(10.50) + 13\] - 5, \[3(10.50) + 13\] - 5, and \[10.50 + 3(14)\] - 5.
- Understanding that parentheses may be used to indicate multiplication.
- Understanding that brackets are placed outside of parentheses to group operations and expressions included within brackets.
- Understanding that the expression within the innermost grouping symbols must be simplified first.

**Vocabulary**
- Expression
- Order of operations
- Parentheses
- Simplify
- Value

© 2017 Region 4 Education Service Center 16
What is in a lesson found in *Closing the Distance*?

**Order of Operations**

**Evaluate: Order of Operations**

The purpose of this activity is assess students’ understanding of how to simplify expressions using the order of operations.

<table>
<thead>
<tr>
<th>Question</th>
<th>TEKS</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5(4)(E)</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>9(4)(F)</td>
<td>D</td>
</tr>
<tr>
<td>3</td>
<td>5(4)(F)</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>5(4)(F)</td>
<td>C</td>
</tr>
</tbody>
</table>

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.
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.

What is in a lesson found in Closing the Distance?