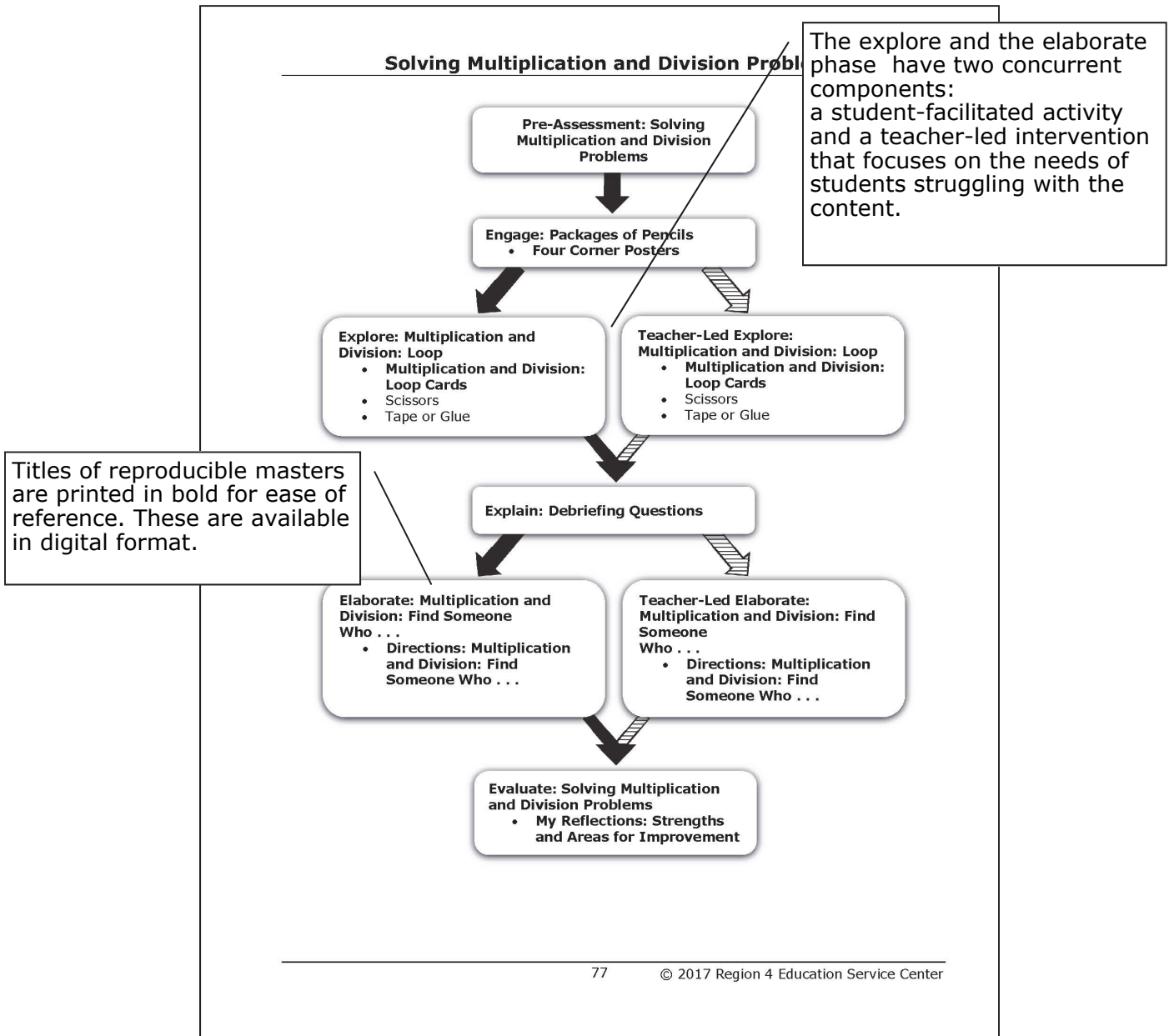


# What is in a lesson found in *Closing the Distance*?



# 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.

## Solving Multiplication and Division Problems

Phase	Activity Title	TEKS	Additional Materials	Instructional Grouping
Pre-Assessment	<b>Pre-Assessment: Solving Multiplication and Division Problems</b>	3(4)(K)		Individual
Engage	<b>Packages of Pencils</b> (for display)	3(4)(K)	<ul style="list-style-type: none"> <li>• <i>Four Corner Posters</i> (1 set for display)</li> </ul>	Individual
Explore Explain	<b>Multiplication and Division: Loop</b>	3(4)(K)	<ul style="list-style-type: none"> <li>• <b>Multiplication and Division: Loop Cards</b></li> <li>• Scissors</li> <li>• Tape or Glue</li> </ul>	Groups of 2 Whole Group
Elaborate	<b>Multiplication and Division: Find Someone Who . . .</b>	3(4)(K)	<ul style="list-style-type: none"> <li>• <b>Directions: Multiplication and Division: Find Someone Who . . .</b> (for display)</li> </ul>	Groups of 2
Evaluate	<b>Evaluate: Solving Multiplication and Division Problems</b>	3(4)(K)	<ul style="list-style-type: none"> <li>• <b>My Reflections: Strengths and Areas for Improvement</b></li> </ul>	Individual

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

**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**.

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

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*?

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.

## 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.

#### Additional Directions

- Advance preparation: Post the **Four Corner Posters** around the room.
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.*

#### Additional Materials

- **Four Corner Posters** (1 set for display)

#### Vocabulary

- *Divide*
- *Multiply*
- *One-step problem*
- *Two-step problem*



### 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.

#### Directions

None

#### 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.*

#### Additional Materials

- **Multiplication and Division: Loop Cards**
- Scissors
- Tape or Glue

#### Vocabulary

- *Divide*
- *Multiply*
- *One-step problem*
- *Two-step problem*

Key vocabulary terms are identified for each phase.

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

# 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.

## Solving Multiplication and Division Problems



### Q&A 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?



### 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)

#### Listen For . . .

- *Understanding that Alyssa's and Perla's strategy reflect forming groups of four of each color of flower to determine the total number of flowers needed.*
- *Understanding that Mike's strategies reflects determining the total number of flower to make one basket and then forming groups of 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.*

#### Vocabulary

- Divide
- Multiply

### 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.

Question	TEKS	Correct Answer
1	3(4)(K)	D
2	3(4)(K)	B
3	3(4)(K)	A
4	3(4)(K)	D

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

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

## Solving Multiplication and Division



### Small-Group Intervention Suggestions

#### Teacher-Led Explore: Multiplication and Division: Loop

##### Vocabulary

*Divide, multiply, one-step problem, two-step problem*

##### Small-Group Directions

###### Step 1

- A) Read and analyze the problem involving Taryn.
- What is the problem asking?
  - What do you know in the problem?
  - What information do you need to know?
- B) Use a teacher think-aloud process and model the first step of the problem.
- What is the first thing we need to do to solve the problem? Why?
  - How many packages of erasers does Taryn have?
  - How many erasers are in 1 package?
  - What is a number sentence that can be used to determine the total number of erasers Taryn has?
- C) Provide students time to determine the product.
- D) Use a teacher think-aloud process to model the second step of the problem.
- What is the next step in the problem? Why?
  - Why are 3 erasers being subtracted from 30?
  - What is the number sentence that can be used to determine the total cost of the picture frames sold?
- E) Provide students time to determine the difference.
- F) Ask, "How many erasers does Taryn have left?"
- G) Identify the card that contains the correct answer and attach it to the bottom of the card with the matching word problem.

###### Step 2

- A) Read and analyze the problem about purchasing packages of erasers.
- What is the problem asking?
  - What do you know in the problem?
  - What information do you need to know?
  - How many steps will it take to solve this problem?
- B) Use a teacher think-aloud process to model the problem.
- How much does 1 package of erasers cost?
  - What does \$36 represent in the problem?
  - What is a number sentence that can be used to determine how many packages of erasers can be purchased for \$36?

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.

# 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.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## My Reflections: Strengths and Areas for Improvement

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

Lesson Activity	I can solve one-step problems involving multiplication using pictorial models, properties of operations, and recall of facts.	I can solve one-step problems involving division using pictorial models, properties of operations, and recall of facts.	I can solve two-step problems involving multiplication or division using pictorial models, properties of operations, and recall of facts.
Packages of Pencils			
Multiplication and Division: Loop			
Multiplication and Division: Find Someone Who . . .			
Evaluate: Solving Multiplication and Division Problems			

I am most proud . . .

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

To improve my understanding, I . . .

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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