

# What's Your Story?

Grade 3

Activity 312

Relevant Chapters in the *Digi-Block Comprehensive Teacher's Guide*:  
Book III, 3-1: Developing Meaning for Multiplication, pp. 75-79

## Overview

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Students are given three related numbers - for example, 3, 4, and 12. They write equations and use blocks to model multiplication problems with these related numbers. They write multiplication stories for each set of numbers.

## Objectives

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**Thinking Skills:** Students apply the concept of repeated addition to beginning ideas about multiplication. They make connections between the models of equal groups and the corresponding multiplication sentences and stories.

**Mastery Skills:** Students use blocks to model repeated addition and equal groups. They learn to write multiplication sentences represented by the blocks and to write stories to go with these sentences.

## Materials

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For demonstration:

- One card with the numbers "5, 6, 30" written in large type

Each student needs:

- 40 single blocks and 8 small holders
- "What's Your Story" Activity Sheet 1 and Activity Sheet 2

### Class Introduction

(15 - 20 minutes)

Introduce the activity:

- Show the "5, 6, 30" card to the class.
- Ask students if anyone can guess how these three numbers are related.
- Have students test their suggestions.

Decide as a class that 5 times 6 equals 30 and 6 times 5 equals 30.

- Ask one student to model 5 groups of 6.
- Ask another student to model 6 groups of 5.
- Have both students determine the total number of blocks (30).

Assist students in writing appropriate number sentences for their physical representations. If students begin with a repeated addition sentence, they should be led to a multiplication sentence. A sequence might involve:

- $5 + 5 + 5 + 5 + 5 + 5 = 30$
- 6 groups of 5 blocks is 30 or  $6 \times 5 = 30$

*Or conversely (this way is correct too but much less common in the U.S.):*

- 5 blocks taken 6 times or  $5 \times 6 = 30$

- $6 + 6 + 6 + 6 + 6 = 30$
- 5 groups of 6 is 30 or  $5 \times 6 = 30$

*Or conversely (this way is correct too but much less common in the U.S.):*

- 6 blocks taken 5 times is 30 or  $6 \times 5 = 30$

Some students may have difficulty thinking about  $5 \times 6$  as either 5 groups of 6 ( $6 + 6 + 6 + 6 + 6$ ) or 5 blocks taken 6 times ( $5 + 5 + 5 + 5 + 5 + 5$ ). If so,

- Your class may want to agree on one way of modeling the problems for this lesson.

- However, students should be aware that both ways of interpreting the sentence are correct. Insisting on one way of understanding can be detrimental to students who have learned it the other way in other classrooms or in other cultures.

Once an appropriate multiplication sentence is determined, ask students to consider an everyday situation in which it is necessary to multiply  $5 \times 6$  to get 30 or  $6 \times 5$  to get 30. Here are some examples:

- I bought 5 packages of pencils. Each package had 6 pencils in it. I bought 30 pencils in all.
- I had 5 raisins in my cereal bowl this morning. My sister had 6 times as many raisins as I did. She had 30 raisins in her cereal bowl.

Ask students to explain how their story maps to the parts of the equation.

Give students the opportunity to ask questions and comment on the stories.

### Pair Activity

(15 - 20 minutes)

Pass out the materials. Have students work with a partner to:

- Write a number sentence that fits the sets of numbers shown on the activity sheet.
- Arrange their single blocks to physically show their chosen number sentence.
- Make a drawing of their block arrangement.
- Write a real-life scenario or story that corresponds with their arrangement of blocks.

If students finish early, have them choose three related numbers on their own and repeat the steps as before. They can record their work on the back of either activity sheet.

### Closure

(10 - 15 minutes)

Have one pair of students read a story from their activity sheets to the class.

- Ask the remainder of the students to determine which set of numbers was used and what number sentence is appropriate for their story.

- Then ask other pairs of students to share stories about the same set of numbers (Note: Students should find it interesting to hear 4 or 5 different stories for the same numbers.)
- Make sure the class can map each story to the parts of a number sentence.

### Assessment

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- Are students working collaboratively?
- Are students asking their partners for ideas to determine possible number sentences and story lines?
- Do students write appropriate number sentences for the given numbers?
- Do students choose appropriate stories for the number sentences?
- During the closure, do the students listen to each other's stories and write appropriate number sentences?
- Do students adequately articulate how their story maps to parts of the number sentence?

### Extensions

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- Have students write a story first and then ask other students to write a number sentence to accompany the story.
- Ask students to look in books and magazines for pictures that represent multiplication sentences. Challenge students to find several different pictures that represent the same number sentence.

Names \_\_\_\_\_

4, 32, 8

Our number sentence: \_\_\_\_\_

Picture of our number sentence:

**Our Story:**

21, 3, 7

Our number sentence: \_\_\_\_\_

Picture of our number sentence:

**Our Story:**

Names \_\_\_\_\_

6, 24, 4

Our number sentence: \_\_\_\_\_

Picture of our number sentence:

**Our Story:**

5, 7, 35

Our number sentence: \_\_\_\_\_

Picture of our number sentence:

**Our Story:**