



MISSISSIPPI

# EXEMPLAR

Units & Lessons

MATHEMATICS

Grade 1

Grant funded by:



## Lesson 9: Pirates Solve Word Problems

**Focus Standard(s):** 1.OA.2, 1.OA.8

**Additional Standard(s):** 1.OA.4

**Standards for Mathematical Practice:** SMP.3, SMP.6

**Estimated Time:** 70 minutes

**Resources and Materials:**

- Handout 9.1: Pirates Solve Story Problems Cards
- Handout 9.2: Pirates Solve Story Problems Homework
- Pirates Go to School- <https://www.youtube.com/watch?v=xSgFV-QAPIA>

**Lesson Target(s):**

- Students will use addition and subtraction to solve problems.
- Students will use strategies to solve problems (ex. counting on, counting back, making ten).
- Students will identify relationships between addition and subtraction when solving problems. (Ex. Knowing that if  $4 + 3 = 7$ , I also know that  $7 - 4 = 3$ ).
- Students will be able to justify their answers.
- Students will be able to explain the strategy used to solve the problem and their reason for selecting it.

**Guiding Question(s):**

- What does the word 'organize' mean?
- What should be organized?

## Vocabulary

**Academic Vocabulary:** Refer to the word wall frequently.

- Addition
- Compare
- Difference
- Minus
- Reasonable
- Subtraction
- Sum
- Total

**Instructional Strategies for Academic Vocabulary:**

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context
- Create pictures/symbols to represent words
- Write/discuss using the words
- Act out the words or attach movements to the words

### Symbol

### Type of Text and Interpretation of Symbol



Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level



Assessment (Pre-assessment, Formative, Self, or Summative)

## Instructional Plan

**Understanding Lesson Purpose and Student Outcomes:**

Students will use the adapted Frayer model to organize their work for word problems, first working with a partner then independently.

**Anticipatory Set/Introduction to the Lesson: Pirates Go to School**

Have students in a circle group and read, *Pirates Go to School* by Corinne Demas and illustrated by John Manders.

Or play the video of the book being read: [Pirates Go to School](#).

**Activity 1: Pirate Flat Skull's Parrots**

Show the following word problem on the board and do a close read with the students:

Pirate Jack had 7 parrots. Pirate Flat Skull had some parrots, too. All together they had 12 parrots. How many parrots does Pirate Flat Skull have?

Draw the following adapted Frayer model on the board:

?	#'s
Number Sentences	Model

Ask students what they are looking for in this story problem. In the top left hand box write "Flat Skull's Parrots". Ask students to find the numbers in the story and tell what they mean. Write the numbers in the top right hand box: (7 – Pirate Jack's parrots, 12 – parrots all together). Ask students what kind of model could be used for this story (number line, number bond, part, part, whole). Draw the model in the bottom right hand box. Tell students to use their model to find the missing addend. Ask students what 2 number sentences they can write with the 3 numbers? ( $7 + 5 = 12$ ,  $5 + 7 = 12$ ,  $12 - 5 = 7$ ,  $12 - 7 = 5$ ) Write the number sentences in the bottom left hand box. Tell students to turn to an elbow buddy and explain how this way of solving a story problem is helpful (SMP.6).

**For students who are EL, have disabilities, or perform well below grade level:**

- Provide a Frayer model and a copy of the word problem with question and numbers highlighted.

**Extensions for students with high interest or working above grade level:**

- Give students a Frayer model already completed and have them write a story problem to match.

**Activity 2: Partner Work**

Show students how to make the adapted Frayer model by folding a piece of paper in four parts (hot dog then hamburger folds). Distribute one word problem from **Handout 9.1: Pirates Solve Story Problems Cards** to each pair of students. Instruct students to work together using the Frayer model to illustrate and solve the story problem. When student pairs are finished with their problem, give each student their own problem to work independently. After they have finished their individual problem, tell students to check their partner's work, communicate any problems, and justify solutions (SMP.3).

**For students who are EL, have disabilities, or perform well below grade level:**

- Work with students who have difficulty reading.
- Students will be given a Frayer model and teacher guide through the process of solving.

**Reflection and Closing: Writing to Understand**

- ✓ Have students work with a partner to write a pirate story problem with a missing addend for the numbers 2 and 13.

## Homework

Distribute **Handout 9.2: Pirates Solve Story Problems Homework** and tell students they will complete the homework worksheet.

### Homework 9.1: Pirates Solve Story Problems Cards

<p>Captain Hook is angry with his crew. There were 14 crew members in the morning but only 7 in the evening. How many crew members walked the plank?</p>	<p>Captain Patch has 9 parrots. Blackbeard has 7 parrots. However, Captain Kidd has as many parrots as Captain Patch and Captain Blackbeard. How many parrots does Captain Kidd have?</p>
<p>Polly the parrot found 11 crackers. She ate one for lunch and one for dinner. How many crackers does she have left for tomorrow?</p>	<p>Today, Captain Jack's parrot ate 8 crackers for lunch and 9 for dinner. How many crackers did Captain Jack's parrot eat today?</p>
<p>Blackbeard followed the treasure map to find the hidden treasure. He took 5 steps North, 6 steps West, and then some steps South. If he took 20 steps in all, how many steps did Blackbeard take South?</p>	<p>Captain Nick found 7 gold coins on the beach. Pirate Pete found 9 gold coins. How many gold coins did they have altogether?</p>
<p>The pirate ship, Jolly Roger, has 13 sails. Five of the sails are main sails and the rest are jib sails. How many are jib sails?</p>	<p>Peg Leg, the ship's cook, cooked 19 hamburgers for the crew's supper. He put mustard and ketchup on 11 of them and only mustard on the rest. How many hamburgers only had mustard?</p>
<p>Big Tooth the shark, has 20 new friends. Seven of them are Great White Sharks, 6 of them are Hammerhead Sharks, and the rest are Sand Sharks. How many of Big Tooth's friends are Sand Sharks?</p>	<p>Pirate Pete's treasure chest contains 15 rings. Three of the rings have diamonds, 7 of them have emeralds, and the rest have rubies. How many rings have rubies?</p>

**Handout 9.2: Pirates Solve Story Problems Homework (side 1)**

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

Use the Four-Part method on the back of this sheet to solve this problem:

Pirate Wanda sailed the seas for 13 days in August. She sailed the seas in September. Altogether, in August and September she sailed 20 days. How many days did she sail in September?

Handout 9.2: Pirates Solve Story Problems Homework (side 2)

?

#'s

Number Sentences

Model



For training or questions regarding this unit,  
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