

# Picnic Fun: Hot Dog Operations

by Donna Loughran

## Math Objective

In this book, children learn how to add and subtract using number strategies. Children discover that when they put objects together, they add and find the total, or sum of those objects. Children become familiar with taking things away in order to subtract. They are introduced to the idea that what is left is the difference.

## iMath Discover Activity

In this activity, children roll two number cubes. They compare the numbers by counting out a matching number of blocks for each number. Children find which number is greater than or less than the other by manipulating the blocks. They are introduced to subtraction by taking the smaller number of blocks from the larger.

### Materials

- paper
- pencil
- 2 number cubes
- a set of blocks

➤ **Objectives** Children will:

- compare numbers.
- understand that they can use objects to represent the numbers.
- learn how to add and subtract.
- keep a running total to track their score.

# Lesson Plan

## Before Reading

### Investigation

Ask children to tell what a picnic is. Ask: *What would you pack to take with you on a picnic?* Make a list on the board of the children's answers. Hold up the picture of the picnic on pp. 4–5. Tell children that foods that are easy to hold are a part of a picnic meal. Ask: *Why do people take foods that are easy to eat on a picnic?* Have children count the people in the picture with you. Invite them to talk about other things they can count in the picture.

Ask children to share how many plates they put on the table at meal times. Ask: *Add up how many people sit at your dinner table to find out how many plates are used. If you can't be there for dinner, how many plates will you need?*

### Math Concepts

A picnic is a meal eaten outdoors often during a trip away from home. Because a picnic is held outside, people pack foods that can be eaten easily like hot dogs or corn on the cob.

Children count saying the number names in the standard order, pairing each person or object with one number name.

Connecting to how they use addition and subtraction helps children engage in the topic.

Explain that children will read about many different ways to add and subtract in this book. They will use a ten frame. And they will use linking cubes. They will learn to count on to add and count back to subtract. They will help find out if there are enough hot dogs to feed everyone at the picnic.

## During Reading

### Investigation

pp. 6–7: Read these pages aloud. Invite children to answer the questions. Ask children to share how they think they might use a ten frame, linking cubes, or counting on and back to add and subtract.

### Math Concepts

Accessing prior knowledge gets children to think about and engage with the topic.

## During Reading (continued)

### Investigation

p. 9: Ask: *What do you like to put on your hot dogs?* Then, draw an empty ten frame on the board. Fill in the ten frame. Draw four red circles, followed by eight yellow circles. Tell the children that the red circles stand for ketchup bottles. The yellow circles stand for mustard bottles. Count the ketchup and mustard bottles in the ten frame along with the children. Ask: *If Mr. Stuart takes away 2 ketchup bottles and 3 mustard bottles, how many bottles are left on the table?* Erase two red circles and three yellow circles from the ten frame. Ask: *How many bottles are left on the table? How many ketchup bottles are left? How many mustard bottles are left?*

pp. 10–11: Put ten bowls where they can be easily seen. Place a line of five more bowls a small distance away from the first group of ten. From their seats, let children count the ten bowls with you. Say: *Now we are going to count on to find the total number of bowls.* Count on to include the remaining five bowls: *eleven, twelve, thirteen, fourteen, fifteen.* Ask: *Two bowls of onions are eaten. How can we count back to find how many bowls are left?* Remove two bowls and say: *Fifteen, fourteen.* Touch the remaining end bowl and say: *thirteen.* *There are thirteen bowls left.*

p. 12: Reread p. 12 aloud. Look at the addition problem together. Ask a volunteer to write the problem on the board:  $5 + 6 + 6 = ?$  Solve the problem together. Ask: *How else could we write this problem?* Let volunteers write the equation in different ways. Ask: *Is the answer always the same, no matter what the order of addends is?* Then ask: *If we add the Fisher twins to the number, how many people are coming to the picnic in all? How many ways can we write the*

### Math Concepts

Children understand the relationship between numbers and quantities, connecting counting to cardinality. They understand how to add and subtract using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; and relate the strategy to a written method..

Children understand the relationship between numbers and quantities, connecting counting to cardinality. They understand that the last number name said tells the number of objects counted.

Children learn that the number of objects is the same regardless of their arrangement or the order in which they were counted.

*addition problem if we include the Fisher twins?*

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pp. 13–14: Ask: *What are the offspring of dogs called? What are the offspring of cats called? What are the names of some other baby animals?* Record children's answers on the board. Say: *You learned that offspring have features from both parents.* Ask: *What do you think a cross between a zebra and a horse would look like?* Record children's answers. Invite volunteers to draw the animal on the board.

Children learn that all animals bear young and that inherited features in offspring come from both parents.

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p. 15: Ask: *Have you ever helped cook something? Have you followed a recipe before? Did you use measuring tools? What kind?* Record children's answers.

Connecting to how they use tools to measure food amounts helps children engage in the topic.

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p. 16: Ask: *Do you know "The Teddy Bear's Picnic"?* Find the song online. Say: *Let's sing the song together.* Then, say: *Look at the picture of the teddy bears. How many bears are there? How many cookies are there for each bear? How many cookies are left over?*

## During Reading (continued)

### Investigation

pp. 17–18: Reread these pages aloud. Invite children to answer the questions. Have volunteers write the problems on the board in different ways using base-ten numerals and number names.

### Math Concepts

Children fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. They mentally add to a given number, and mentally subtract from a given number. Children read and write numbers.

pp. 19–20: Reread these pages aloud and let children share their answers and ideas. Have children explain why they think certain strategies (ten frame, linking cubes, count back) work better than others. Encourage them to draw on the board to help support their conclusions.

Reason and understand why certain strategies are better than others. Explain why addition and subtraction strategies work, using place value and the properties of operations.

p. 21: Work with children to help them plan their own picnic. Provide paper and drawing materials for their charts.

Children manipulate and build concrete models or drawings to understand the relationship between numbers and quantities.

## After Reading

Ask children to restate the key ideas in the book.

### Investigation

Take children to the schoolyard. Provide materials (big spoons and hard-boiled eggs or balls) so that they can experience an egg race as shown on p. 18. Let children count out the spoons and eggs. Run several small races. Demonstrate addition and subtraction by changing the size of the group running each race.

### Understanding Math

Children use objects and each other to have hands on experience counting and adding and subtracting.

Ask children to design a new game for an outdoor picnic. Tell them they must include a ten frame, linking cubes, or counting on and back in their game design. Refer to pp. 6–7. Their game must include addition and subtraction.

Children understand and absorb the ideas of number strategies by building their own game.