AUTHOR:
Stuart J. Murphy

Carly, Luke, and Ryan plan to recycle over 5,000 cans to buy flowers for the Earth Day celebration at Gilroy Park. Will they make enough money to fix up the park in time for Earth Day?

Ages: 5 to 9 years

Interest Level:
Kindergarten to 3rd Grade

ATOS Reading Level: 3.7

Lexile: Not available

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Earth Day - Hooray!

Will Ryan, Luke, and Carly collect 5,000 cans before Earth Day?

Topics: place value, addition

Activities To Do Together:

Use *Earth Day - Hooray!* to explore place value with your child.

Before reading the book, try the following:

- Talk with your child about place value. Explore numbers 1 to 20. Ask your child to identify the numbers that have a digit in only the ones place and the numbers that have digits in both the ones and tens places.

- Write down five numbers between 20 and 99 and ask your child to label the ones and tens digits. When they are ready, include numbers up to 1,000. Prompt them to label the hundreds and thousands digits too.

While reading the book, *Earth Day - Hooray!,* ask your child to:

- Count with Carly, Luke, and Ryan throughout the book.

- Keep track of how many cans are collected.

- Look for the addition equations that are written throughout the book.

When you have finished reading the book, try the following with your child:

- Find a recycling place near you and make a plan to recycle cans for a month. When the month is up, reflect on what you did.

- Talk about other ways to separate the cans.

- Write out the equations found throughout the book; identify the ones, tens, hundreds, and thousands digits; and then solve.

- Have fun with addition equations. Make up your own story and some addition equations to go with it.

- Think about your community. Is there a place you think that needs to be cleaned up? Plan your own clean up day.

Early Math Project
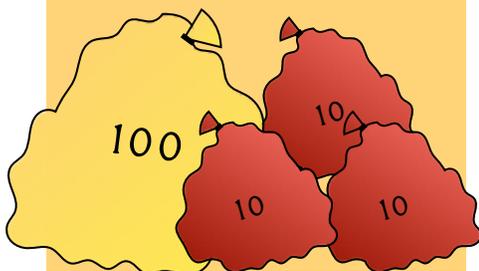
Questions for Mathematical Thinking:

1. How would you group or gather cans to make them easier to count?

2. Why is it important to understand place value?

3. What is important to remember about place value when adding and subtracting? What would you tell someone who was about to add the numbers 12 and 14?

4. What is the value of each 4 in the number 4,444?

5. Why is it important to recycle? What were the benefits of recycling in the book?

Early Math Project Resources:

Get in Order (English)

Place Value Toss (English)

Spanish Versions Coming Soon!

Vocabulary for Building Math Concepts: 10, 56, 60, 100, 359, 691, 1000, 1483, 2174, 2852, 3000, 5026, 247 million, 900 million, 1 billion, 64 billion, 80 billion, a lot, bigger, count, eight, empty, few, five, hundreds, lots, many, more, nine, only, pounds, six, small, some, sorted, thousands

Spanish Title: Not available

Related Books: *Zero the Hero* by Joan Holub; *A Fair Bear Share* by Stuart J. Murphy

Find this book at your local library: https://www.worldcat.org/title/

Early Math Project

Math Connections: Use *Earth Day - Hooray!* to explore place value with your child. Place value is the value of each digit in a number. The place value is determined by the position of the digit. Explore numbers 1 to 20. Ask your child to identify if the number has a digit in the ones and tens place and then identify the value of each digit. For example, the number 25 has a tens and a ones digit. The number 5 represents 5 ones while the 2 represents 2 tens.

Explore numbers from 20 to 99. Write down 5 or more numbers on a piece of paper. Ask your child to draw a square around the number in the ones place and draw a circle around the number in the tens place. After your child is comfortable with two-digit numbers, look at three-digit and four-digit numbers. Have them identify the ones, tens, hundreds, and thousands digits.

An understanding of place value will help your child with multi-digit arithmetic. It is important for your child to know that each digit's place (ones, tens, hundreds, thousands, etc.) determines the value of the digit. For example, if you have the numbers 790 and 173, each number has 7 as one of its digits, however in 790 the 7 represents seven hundred and in 173 the 7 represents seventy.

Children often begin learning how to add two-digit numbers sometime during first grade. If your child has started to learn about two-digit addition, ask them to show you how they have learned to add 12 + 23.

If your child has started learning about regrouping when adding numbers, ask them to show you how they would add numbers like 45 + 37 which involves regrouping. What strategies could your child use to show the value of each digit when adding? For example, use cubes or another manipulative or draw a picture to show the equation. Expanding each number 45 = 40 + 5 and 37 = 30 + 7, may help your child better understand how to solve the equation.

It is important to line up the digits when doing multi-digit addition. Why do you think that is? Does it help to visualize which numbers are in each place value? Why could visualizing the problem help when the number of digits in each number are not the same? For example, 16 + 8.

Go through the book and pause each time Carly, Luke and Ryan are adding the number of cans they collected for the day. Help your child write an equation containing the

Vocabulary for Extending Math Concepts: composing, equation, grouping, place value, regrouping, standard algorithm

Vocabulary for Reading Comprehension: aluminum, pollutes, recycle

Early Math Project
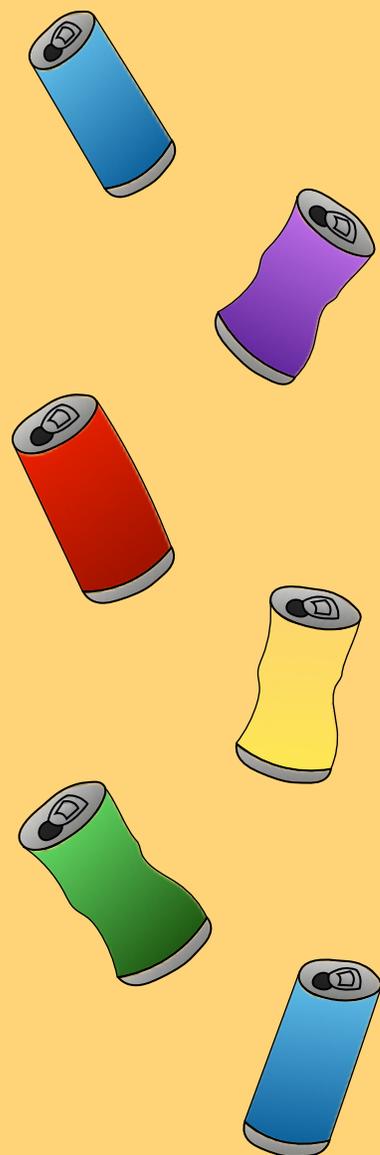
numbers. For example, on page 16, the kids have 5 bags, each containing 10 cans, and 6 single cans. An equation for this could be 10 + 10 + 10 + 10 + 10 + 6 =. What other equations can you make looking at pages 11, 20, 21, 22, 23, 28 and 29? Once your child writes the equations, ask them to identify the ones, tens, hundreds, and thousands places for each number by pointing to the digit and saying its place value. Then solve the equations. Talk about how we commonly begin by adding digits in the ones place and follow by adding the digits in the tens, hundreds, and then the thousands place. Compare that approach to how the cans are added in the book.

Find a recycling place near you and make a plan together to recycle cans for a month. With your child, estimate the number of cans they can collect. Talk about how they will collect the cans and store them. Then research the amount of money they will get for the cans. How is the amount of money determined? Per can? Per pound? Ask them to estimate the amount of money they will get for their cans. What will they do with the money? Encourage your child to write down their plan on a piece of paper and post it where they can see it throughout the month. At the end of the month, talk with your child about how closely they followed their plan and whether they collected their estimated number of cans. Did they follow their plan exactly? Did they group the cans in a way that made it easier to count? Ask your child to tell you about what they discovered about recycling. Ask them to evaluate the success of their recycling efforts. Would they like to refine their plan and try a different strategy?

Age Level	Related Preschool Foundations and CA State Standards
Kindergarten	**Number and Operations in Base Ten** **K.NBT.1** Work with numbers 11–19 to gain foundations for place value.
Grade 1	**Number and Operations in Base Ten** **1.NBT.2** Understand place value. **1.NBT.4** Use place value understanding and properties of operations to add and subtract.
Grade 2	**Number and Operations in Base Ten** **2.NBT.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. **2.NBT.3** Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form. **2.NBT.5** Use place value understanding and properties of operations to add and subtract.
Grade 3	**Number and Operations in Base Ten** **3.NBT.1** Use place value understanding and properties of operations to perform multi-digit arithmetic. **3.NBT.2** Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.